

*see vol. 24 77*  
**No. 11642**

IN THE  
**United States Circuit Court of Appeals**  
FOR THE NINTH CIRCUIT

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REFRIGERATION ENGINEERING, INC., a corpo-  
ration,

Appellant,

vs.

YORK CORPORATION, a corporation,

Appellee.

and

YORK CORPORATION, a corporation,

Appellant,

vs.

REFRIGERATION ENGINEERING, INC., a corpo-  
ration,

Appellee.

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**TRANSCRIPT OF RECORD**

(In Four Volumes)

**VOLUME I**

(Pages 1 to 368, Inclusive)

Upon Appeals from the District Court of the United States  
for the Southern District of California,  
Central Division

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*FILED*  
*DEC 19 1937*  
*PAUL F. O'BRIEN*



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# INDEX

[Clerk's Note: When deemed likely to be of an important nature, errors or doubtful matters appearing in the original certified record are printed literally in italics; and likewise, cancelled matter appearing in the original certified record is printed and cancelled herein accordingly. When possible an omission from the text is indicated by printing in italics the two words between which the omission seems to occur.]

	Page
Answer and Cross-Complaint.....	7
Answer to Cross-Complaint.....	10
Appeal:	
Designation of Contents of Record on, Stipulated....	29
Notice of, of Defendant.....	27
Notice of, of Plaintiff.....	28
Order re Record on.....	30
Statement of Points to Be Relied Upon on, Refrigeration Engineering, Inc. (Circuit Court).....	1114
Statement of Points to Be Relied Upon on, York Corporation (Circuit Court).....	1109
Stipulated Designation of Parts of Record to Be Printed on (Circuit Court).....	1115
Certificate of Clerk.....	38
Complaint for Declaratory Judgment on U. S. Patent No. 2,219,393, Amended Bill of.....	2
Cross-Complaint, Answer and.....	7
Cross-Complaint, Answer to.....	10
Designation of Contents of Record on Appeal, Stipulated (District Court).....	29
Designation of Parts of Record to Be Printed Under Rule 19(6), Stipulated (Circuit Court).....	1115
Docket Entries .....	31
Findings of Fact and Conclusions of Law.....	13
Judgment .....	24

	Page
Names and Addresses of Attorneys.....	1
Notice of Appeal, Defendant's.....	27
Notice of Appeal, Plaintiff's.....	28
Opinion .....	12
Order re Record on Appeal.....	30
Reporter's Transcript of Proceedings on Trial.....	39
Defendant's Exhibits (See Index to Exhibits)	
Plaintiff's Exhibits (See Index to Exhibits)	
Testimony on Behalf of Defendant:	
Dahl, Niel—	
Direct examination .....	1073
Cross-examination .....	1085
Doble, William A.—	
Direct examination .....	209
Direct examination (recalled).....	244
Cross-examination .....	257
Jarvis, H. T.—	
Direct examination .....	40
Cross-examination .....	77
Redirect examination .....	104
Recross-examination .....	112
Redirect examination .....	114
Recross-examination .....	115
Direct examination (recalled).....	1090
Cross-examination .....	1100
Johnston, Ellwood B.—	
Direct examination .....	235
Cross-examination .....	238

Reporter's Transcript of Proceedings on Trial	Page
Testimony on Behalf of Defendant:	
Lawrence, Howard B.—	
Direct examination .....	122
Cross-examination .....	130
Payne, James R.—	
Direct examination .....	157
Cross-examination .....	174
Ruppright, Siegfried—	
Direct examination .....	136
Cross-examination .....	142
Redirect examination .....	144
Recross-examination .....	146
Tally, Carey K.—	
Direct examination .....	147
Cross-examination .....	157
Tuttle, William R.—	
Direct examination .....	239
Cross-examination .....	242
Walling, C. L.—	
Direct examination .....	192
Cross-examination .....	198
Weber, Karl—	
Direct examination .....	186
Wilde, Carl E.—	
Direct examination .....	1064
Cross-examination .....	1071

Reporter's Transcript of Proceedings on Trial	Page
Testimony on Behalf of Plaintiff:	
Barton, Fred C. (deposition)—	
Direct examination .....	402
Cross-examination .....	415
Redirect examination .....	428
Bauer, Frank C. (deposition)—	
Direct examination .....	298
Cross-examination .....	306
Redirect examination .....	308
Brandt, Jesse O. (deposition)—	
Direct examination .....	313
Cross-examination .....	330
Redirect examination .....	344
Recross-examination .....	345
Broms, Anton (deposition)—	
Direct examination .....	700
Cross-examination .....	734
Redirect examination .....	738
Chamberlain, Joseph Reddington—	
Direct examination .....	986
Cross-examination .....	1040
Examination by the Court (recalled).....	1049
Dalin, Axel Julius—	
Direct examination .....	976
Cross-examination .....	982
Redirect examination .....	983
Recross-examination .....	984

Reporter's Transcript of Proceedings on Trial Testimony on Behalf of Plaintiff:	Page
Dithmer, Henry L., Jr. (deposition)—	
Direct examination .....	466
Cross-examination .....	470
Eustice, C. W. (deposition)—	
Direct examination .....	832
Cross-examination .....	845
Redirect examination .....	850
Fuller, W. C. (deposition)—	
Direct examination .....	680
Cross-examination .....	687
Redirect examination .....	688
Gaide, Albert (deposition)—	
Direct examination .....	539
Cross-examination .....	553
Redirect examination .....	563
Recross-examination .....	566
Redirect examination .....	566
Goldsmith, Elmer Le Grand (deposition)—	
Direct examination .....	477
Cross-examination .....	483
Redirect examination .....	486
Harkins, Edward (deposition)—	
Direct examination .....	384
Cross-examination .....	394
Redirect examination .....	399

Reporter's Transcript of Proceedings on Trial	Page
Testimony on Behalf of Plaintiff:	
Hayes, Herbert E. (deposition)—	
Direct examination .....	435
Cross-examination .....	451
Redirect examination .....	463
Recross-examination .....	465
Hulse, W. C.—	
Direct examination .....	919
Cross-examination .....	948
Redirect examination .....	974
Kennedy, Edward G. (deposition)—	
Direct examination .....	361
Cross-examination .....	369
Redirect examination .....	372
Recross-examination .....	375
Kernan, A. Raphael (deposition)—	
Direct examination .....	309
Cross-examination .....	312
Redirect examination .....	313
Lietz, Herman Leopold (deposition)—	
Direct examination .....	568
Martin, Charles Edward (deposition)—	
Direct examination .....	501
Mueller, Alfred E. (deposition)—	
Direct examination .....	573
Cross-examination .....	612

Reporter's Transcript of Proceedings on Trial	Page
Testimony on Behalf of Plaintiff:	
Nester, Oscar W. (deposition)—	
Direct examination .....	470
Cross-examination .....	473
Personius, George A. (deposition)—	
Direct examination .....	656
Postlewaite, Mark A. (deposition)—	
Direct examination .....	869
Cross-examination .....	891
Redirect examination .....	916
Recross-examination .....	917
Simons, Earl Charles (deposition)—	
Direct examination .....	488
Cross-examination .....	489
Redirect examination .....	494
Recross-examination .....	496
Smith, Louis V. (deposition)—	
Direct examination .....	654
Direct examination (recalled).....	657
Redirect examination .....	670
Direct examination (recalled).....	689
Cross-examination .....	690
Stage, Charles E. (deposition)—	
Direct examination .....	497
Tominac, Nicholas L. (deposition)—	
Direct examination .....	505
Cross-examination .....	515
Redirect examination .....	532

Reporter's Transcript of Proceedings on Trial	Page
Testimony on Behalf of Plaintiff:	
Trullinger, Fred L. (deposition)—	
Direct examination .....	751
Cross-examination .....	795
Redirect examination .....	813
Recross-examination .....	820
Redirect examination .....	823
Van Patten, Ralph (deposition)—	
Direct examination .....	690
Cross-examination .....	694
Redirect examination .....	696
Recross-examination .....	696
White, H. Calvin—	
Direct examination (sur-rebuttal).....	1105
Statement of Points to Be Relied Upon on Appeal, Refrigeration Engineering, Inc. (Circuit Court)....	1114
Statement of Points to Be Relied Upon on Appeal, York Corporation (Circuit Court).....	1109
Stipulated Designation of Contents of Record on Ap- peal (District Court).....	29
Stipulated Designation of Parts of Record to Be Printed Under Rule 19(6) (Circuit Court).....	1115



## INDEX TO EXHIBITS

Defendant's Exhibits:	Page
A. Copy of Harry H. McAdam patent No. 2,219,393, granted October 29, 1940 (In Evidence) .....	39
(In Book of Exhibits).....	1483
B. Letter dated November 3, 1939 (For Identification) .....	48
C. Reprint from Air Conditioning Refrigeration News of September 17, 1941 (For Identification) .....	61
(In Evidence) .....	168
D. Letter, dated June 16, 1939, to Johnson Pie Company from Mr. Kirkwood (For Identification) .....	71
(In Evidence) .....	72
(In Book of Exhibits).....	1484
E. License Agreement between Refrigeration Engineering, Inc., and Drayer & Hanson, Inc. (For Identification) .....	75
F. License agreement between Refrigeration Engineering, Inc., and The Bush Manufacturing Company (For Identification).....	75
G. License agreement between Refrigeration Engineering, Inc., and General Machinery Company (For Identification).....	75
H. License agreement between Refrigeration Engineering, Inc., and McQuay, Inc. (For Identification) .....	75
(In Evidence) .....	76
(In Book of Exhibits).....	1485
I. License agreement between Refrigeration Engineering, Inc., and Manufacturer's Fin Coil Co. (For Identification).....	75

Defendant's Exhibits:	Page
J. License agreement between Refrigeration Engineering, Inc., and Globe Ice Machine Co. (For Identification) .....	75
K. License agreement between Refrigeration Engineering, Inc., and Kramer Trenton Co. (For Identification) .....	75
L. License agreement between Refrigeration Engineering, Inc., and Refrigeration Appliances, Inc. (For Identification).....	75
M. Photograph of the first job for U. S. Marine Captain Shuey (For Identification).....	106
(In Evidence) .....	111
(In Book of Exhibits).....	1493
N. Photograph of a sectional low temperature walk-in box (For Identification).....	107
(In Evidence) .....	111
(In Book of Exhibits).....	1494
O. Drawing of Recommended Method of Defrosting Model No. M. 600S, dated 12/17/41 (For Identification) .....	107
(In Evidence) .....	111
(In Book of Exhibits).....	1495
P. Drawing of proposed substitute coil in place of Recold 70 LT special, dated 10/21/41 (For Identification) .....	107
(In Evidence) .....	111
(In Book of Exhibits).....	1496
Q. Drawing of Coil No. SW-550-LTS, dated 4/14/43 (For Identification).....	107
(In Evidence) .....	111
(In Book of Exhibits).....	1497

Defendant's Exhibits:	Page
R. Page 101-B of Section 210-A, dated February 1, 1936, taken from the York Corporation Price Book (In Evidence).....	117
(In Book of Exhibits).....	1498
S. Page 43 of Section 160, dated December 21, 1934, taken from the York Corporation Price Book (In Evidence).....	117
(In Book of Exhibits).....	1500
T. A circular entitled, "York Utility Air Cooler," bearing copyright date, "Copyright, York Ice Machinery Corporation, 1934" (In Evidence)	118
(In Book of Exhibits).....	1502
U. Sales slip from the Creamery Package Manufacturing Company (For Identification).....	126
(In Evidence) .....	127
(In Book of Exhibits).....	1504
V. Letter, dated February 27, 1940, to Creamery Package Company from Howard B. Lawrence (For Identification) .....	127
(In Evidence) .....	129
(In Book of Exhibits).....	1505
W. Photograph showing first installation by Creamery Package in Los Angeles (For Identification) .....	129
(In Evidence) .....	130
(In Book of Exhibits).....	1507
X. Photograph showing water control valve on first installation at the Creamery Package Company (For Identification).....	129
(In Evidence) .....	130
(In Book of Exhibits).....	1508

Defendant's Exhibits:	Page
Y. Pages 24, 25 and 26 of "The Ice Cream Review," dated September, 1934 (In Evidence)	135
(In Book of Exhibits).....	1509
Z. Article on defrosting taken from the Refrigeration Engineering publication, dated June, 1936 (In Evidence).....	139
(In Book of Exhibits).....	1512
AA. Article taken from the Refrigerating Engineering publication, dated March, 1931 (For Identification) .....	140
(In Evidence) .....	140
(In Book of Exhibits).....	1517
BB. Print of a drawing of Recold snug-wall water defrost coil (For Identification).....	187
(In Evidence) .....	191
(In Book of Exhibits).....	1525
CC. Stipulation (In Evidence).....	208
(In Book of Exhibits).....	1527
DD. Infringement chart (For Identification).....	212
(In Evidence) .....	262
(In Book of Exhibits).....	1539
EE. Photograph of a Recold unit (For Identification) .....	226
FF. Total advertising expenditures made for the years 1938, 1939 and 1940 (For Identification) .....	1092
GG. Water defrost unit (In Evidence).....	1103
Exhibit A to Deposition of Witness Barton—Sketch of Valve (In Evidence).....	503
(In Book of Exhibits).....	1547

## Plaintiff's Exhibits:

No.	Page
1—Drawing of Pittsburg Dry Blast Plant No. 940 (In Evidence).....	400
(In Book of Exhibits).....	1117
2A—Robert Taylor letter, July 22, 1906, first page (In Evidence).....	400
(In Book of Exhibits).....	1118
2B—Robert Taylor letter, July 22, 1906, second page (In Evidence).....	400
(In Book of Exhibits).....	1119
3—Robert Taylor letter, "Think About This" (In Evidence) .....	400
(In Book of Exhibits).....	1120
4—Robert Taylor letter, July 23, 1906 (In Evidence) .....	400
(In Book of Exhibits).....	1121
5—Robert Taylor letter, July 24, 1906 (In Evidence) .....	400
(In Book of Exhibits).....	1122
6A—Robert Taylor letter, July 25, 1906, first page (In Evidence).....	400
(In Book of Exhibits).....	1123
6B—Robert Taylor letter, July 25, 1906, second page (In Evidence).....	400
(In Book of Exhibits).....	1124
7—Drawing of Dry Blast Plant of Northwestern Iron Company (For Identification).....	598
(In Evidence) .....	631
(In Book of Exhibits).....	1125

## Plaintiff's Exhibits:

No.	Page
8—Drawing of Dry Blast Plant of Northwest- ern Iron Company (For Identification).....	598
(In Evidence) .....	631
9—(Not offered)	
10—Brandt's model of Dry Blast Plant (In Evi- dence) .....	400
11—Photographs of Dry Blast Plant (In Evi- dence) .....	400
(In Book of Exhibits).....	1126
12—(Not offered)	
13—Barton's letter, January 18, 1934 (For Iden- tification) .....	404
(In Evidence).....	503
(In Book of Exhibits).....	1127
14—Nester's Purchase Order 11749 (For Iden- tification) .....	404
(In Evidence) .....	503
(In Book of Exhibits).....	1131
15—Hayes Brothers' Invoice No. R-1155 (For Identification) .....	404
(In Evidence) .....	503
(In Book of Exhibits).....	1132
16—Hayes Brothers' Invoice No. R-1156 (For Identification) .....	405
(In Evidence) .....	503
(In Book of Exhibits).....	1133
17—Polar letter, May 2, 1934 (For Identifica- tion) .....	407
(In Evidence) .....	503
(In Book of Exhibits).....	1134

## Plaintiff's Exhibits:

No.	Page
18—Photograph of inside of ice storage room	
(For Identification) .....	408
(In Evidence) .....	503
(In Book of Exhibits).....	1135
19—Photograph of close-up of McQuay unit	
(For Identification) .....	408
(In Evidence) .....	503
(In Book of Exhibits).....	1136
20—Photograph of outside of shed showing hole	
in wall (For Identification).....	410
(In Evidence) .....	503
(In Book of Exhibits).....	1137
21—Photograph of inside of shed showing com-	
pressor unit (For Identification).....	410
(In Evidence) .....	503
(In Book of Exhibits).....	1138
22—Crane valve (For Identification).....	449
(In Evidence) .....	503
23—Polar voucher, dated July 11, 1934 (For	
Identification) .....	469
(In Evidence) .....	503
(In Book of Exhibits).....	1139
24—Page from Goldsmith's diary (For Identifi-	
cation) .....	479
(In Evidence) .....	503
(In Book of Exhibits).....	1140
25—Goldsmith letter to Galt, September 5, 1934	
(For Identification) .....	480
(In Evidence) .....	503
(In Book of Exhibits).....	1141



## Plaintiff's Exhibits:

No.	Page
26—Galt letter to Goldsmith, September 20, 1934	
(For Identification) .....	481
(In Evidence) .....	503
(In Book of Exhibits).....	1146
27—Goldsmith letter to Hayes, September 24, 1934 (For Identification).....	482
(In Evidence) .....	503
(In Book of Exhibits).....	1147
28—Goldsmith bill to Hayes (For Identification)	483
(In Evidence) .....	503
(In Book of Exhibits).....	1150
29—Sketch of Hayes Automatic Defroster (For Identification) .....	499
(In Evidence) .....	503
(In Book of Exhibits).....	1151
30—Photograph of Dry Blast Plant (For Identi- fication) .....	512
(In Evidence) .....	631
(In Book of Exhibits).....	1152
31—Drawing of Dry Blast Plant No. 12,406	
(For Identification) .....	514
(In Evidence) .....	631
(In Book of Exhibits).....	1153
32—Gaide's temperature reports (39 sheets)	
(For Identification) .....	544
(In Evidence) .....	631
(In Book of Exhibits).....	1154



## Plaintiff's Exhibits:

No.	Page
33—Mueller's chart of Chicago temperatures	
(For Identification) .....	582
(In Evidence) .....	631
(In Book of Exhibits).....	1193
34—Mueller's chart of Mayville temperatures	
(For Identification) .....	602
(In Evidence) .....	631
(In Book of Exhibits).....	1194
35—Mueller's chart of Mayville temperatures	
(For Identification) .....	602
(In Evidence) .....	361
(In Book of Exhibits).....	1195
36—Mueller's charts of Mayville temperatures	
(A through I, only E offered) (For Identification) .....	604
(In Evidence) .....	631
(In Book of Exhibits).....	1196
37—Photostats of Exhibit 7, marked by Mueller	
(In Evidence) .....	631
(In Book of Exhibits).....	1205
38—Photograph in pickle room from front of unit	
(For Identification).....	654
(In Evidence) .....	647
(In Book of Exhibits).....	1206
39—Photograph in pickle room from side of unit	
(For Identification) .....	654
(In Evidence) .....	647
(In Book of Exhibits).....	1207

## Plaintiff's Exhibits:

No.	Page
40—Photograph in pickle room showing spray head (For Identification).....	654
(In Evidence) .....	647
(In Book of Exhibits).....	1208
41—Photograph in sausage room from side of unit (For Identification).....	654
(In Evidence) .....	647
(In Book of Exhibits).....	1209
42—Photograph in sausage room showing spray head (For Identification).....	654
(In Evidence) .....	647
(In Book of Exhibits).....	1210
43A—Photostat of announcement dated July 10, 1935, first page (For Identification).....	655
(In Evidence) .....	647
(In Book of Exhibits).....	1211
43B—Photostat of announcement dated July 10, 1935, second page (For Identification).....	655
(In Evidence) .....	647
(In Book of Exhibits).....	1212
44—Photostat of telegram dated June 13, 1935 (For Identification) .....	665
(In Evidence) .....	647
(In Book of Exhibits).....	1213
45—Diagrammatic drawing (For Identification)	667
(In Evidence) .....	647
(In Book of Exhibits).....	1214

Plaintiff's Exhibits:

No.	Page
Y-1—Copy of letter dated September 26, 1936, Electrical Products Consolidated to Fred L. Trullinger (For Identification).....	756
(In Evidence) .....	961
(In Book of Evidence).....	1215
Y-2—Document headed "Electrical Products Con- solidated, Carrier Order Transmittal," dated September 28, 1936 (For Identification).....	757
(In Evidence) .....	961
(In Book of Exhibits).....	1219
Y-3—Document headed "Order," dated September 28, 1936 (For Identification).....	761
(In Evidence) .....	962
(In Book of Exhibits).....	1220
Y-4—\$850.00 check, dated September 28, 1936, payable to Electrical Products Consolidated (For Identification) .....	761
(In Evidence) .....	854
(In Book of Exhibits).....	1226
Y-5—Check, dated November 14, 1936, to Judd Brown (For Identification).....	763
(In Evidence) .....	854
(In Book of Exhibits).....	1226
Y-6—Check, dated November 14, 1936, to Bir- kenwald (For Identification).....	763
(In Evidence) .....	854
(In Book of Exhibits).....	1226

## Plaintiff's Exhibits:

No.	Page
Y-7—Check, dated October 2, 1936, to Eureka Fiber Co. (For Identification).....	763
(In Evidence) .....	854
(In Book of Exhibits).....	1228
Y-8—Check, dated October 2, 1936, to Lafayette Hardware & Lumber Co. (For Identification) .....	763
(In Evidence) .....	854
(In Book of Exhibits).....	1228
Y-9—Check, dated October 2, 1936, to F. J. Leonard (For Identification).....	763
(In Evidence) .....	854
(In Book of Exhibits).....	1228
Y-10—Drawing headed "Yamhill, Oregon Locker Plant of Trullinger & Eustice" (not offered)	
Y-11—Drawing headed "Fig. I." (not offered).....	
Y-12—Drawing headed "Fig. 2 and Fig. 3" (not offered)	
Y-13—Document headed "Invoice, Electrical Products Consolidated," dated December 14, 1936 (For Identification) .....	787
Y-14—Photograph showing valve (For Identification) .....	787
(In Evidence) .....	854
(In Book of Exhibits).....	1231
Y-15—Photograph showing valve (For Identification) .....	789
(In Evidence) .....	854
(In Book of Exhibits).....	1232

## Plaintiff's Exhibits:

No.	Page
Y-16—Photograph showing marks on wall left by insulated wall (For Identification).....	790
(In Evidence) .....	854
(In Book of Exhibits).....	1233
Y-17—Photograph showing hole in diffuser unit (For Identification) .....	791
(In Evidence) .....	854
(Book of Exhibits).....	1234
Y-18—Photograph showing turkey (For Identification) .....	795
(In Evidence) .....	854
(In Book of Evidence).....	1235
Y-19—Trullinger's ledger (particularly at page 184) (For Identification).....	818
(In Evidence) .....	854
(In Book of Exhibits).....	1236
Y-20—Eustice's locker ledger (In Evidence).....	854
(In Book of Exhibits).....	1237
Y-21—Valve (For Identification).....	717
(In Evidence) .....	854
Y-22—Drawing headed "Northwestern Refrigeration Co." (For Identification).....	731
(In Evidence) .....	854
(In Book of Exhibits).....	1238
Y-23—Drawing .....	

## Plaintiff's Exhibits:

No.	Page
Y-24—Photostatic copy of sketch (For Identification) .....	743
(In Evidence) .....	854
(In Book of Exhibits).....	1239
Y-25—Printed folder captioned "Controlled Cooling With Carrier Cold Diffusers" (For Identification) .....	873
(In Evidence) .....	919
Y-26—Registration card dated October 7, 1937 (not offered) .....	
Y-27—Registration card dated October 7, 1937	
(In Evidence) .....	948
(In Book of Exhibits).....	1240
Y-28—Hulse's drawing of Yamhill installation	
(For Identification) .....	939
(In Evidence) .....	944
(In Book of Exhibits).....	1241
100—Title page and pages 592 and 594 of Kent's Mechanical Engineers Handbook (For Identification) .....	96
101—Book of Prior Patents relied upon (In Evidence) .....	294
(In Book of Exhibits).....	1243
102—Pages 181 and 182 of a publication entitled "The Care of a House," by T. M. Clark, published in 1903 (In Evidence).....	294
(In Book of Exhibits).....	1295

## Plaintiff's Exhibits:

No.	Page
103—Copy of York's purchase Order No. 27646 to Refrigeration Engineering, Inc., dated 8-25-39 (For Identification).....	981
(In Evidence) .....	993
(In Book of Exhibits).....	1298
104—Photograph of Lock Plant—Sharp freezer room (For Identification).....	993
(In Evidence) .....	996
(In Book of Exhibits).....	1299
105—Photograph of Fish Storage No. 8, Juneau Cold Storage Co., Juneau, Alaska (For Identification) .....	994
(In Evidence) .....	996
(In Book of Exhibits).....	1300
106—Two sheets from the York price book, dated May 20, 1935 (For Identification).....	997
(In Evidence) .....	999
(In Book of Exhibits).....	1301
107—Five sheets showing rating in tons of refrigeration at various temperatures of air entering the conditioner (For Identification).....	1006
(In Book of Exhibits).....	1303
108—Drawing No. 152895 of Standard Assembly of FB-1400-D5 Unit Aid Conditioner for Brine or Ammonia (For Identification).....	1014
(In Evidence) .....	1040
(In Book of Exhibits).....	1313

## Plaintiff's Exhibits:

No.	Page
109—Drawing No. 153407 of Standard Brine Defrosting Headers for FB-1400-D5 Unit Air Conditioner (For Identification).....	1014
(In Evidence) .....	1040
(In Book of Exhibits).....	1314
110—Drawing No. 153423 of Standard Brine Defrosting Pan for FB-1400-D5 Air Conditioning Unit (For Identification).....	1014
(In Evidence) .....	1040
(In Book of Exhibits).....	1315
111—Part of the Standard York Corporation contract which is used on all jobs (For Identification) .....	1038
(In Evidence) .....	1048
(In Book of Exhibits).....	1317
112—Copy of the file history of the McAdam patent No. 2,219,393 (In Evidence).....	1048
(In Book of Exhibits).....	1324
113—Book of Patents cited in McAdam file wrapper (In Evidence).....	1048
(In Book of Exhibits).....	1441
114—Photostatic copy of the Notice of Infringement received by York Corporation from Mr. Lyon, dated January 5, 1944 (In Evidence) .....	1053
(In Book of Exhibits).....	1481



NAMES AND ADDRESSES OF ATTORNEYS:

For Appellant and Cross-Appellee:

LYON & LYON

LEWIS E. LYON

811 West Seventh Street

Los Angeles 14, Calif.

For Appellee and Cross-Appellant:

MESERVE, MUMPER & HUGHES and

H. CALVIN WHITE

Suite 615, 555 South Flower Street

Los Angeles 13, Calif.

ALEXANDER C. NEAVE of

FISH, RICHARDSON & NEAVE

20 Exchange Place

New York 5, N. Y., of Counsel [1\*]

In the District Court of the United States

Southern District of California

Central Division

Civil No. 4166-PH

YORK CORPORATION,

Plaintiff,

vs.

REFRIGERATION ENGINEERING, INC.,

Defendant.

AMENDED BILL OF COMPLAINT FOR DECLARATORY JUDGMENT ON U. S. PATENT NO. 2,219,393

I.

Plaintiff is a Delaware corporation having its principal place of business at York, Pennsylvania.

II.

Defendant is a California corporation having its principal place of business at Los Angeles, California.

III.

This suit arises out of an actual controversy between the parties; jurisdiction is conferred upon this Court by the Declaratory Judgment Statute, 274d of the Judicial Code (28 U. S. C. A. §400), and by the Patent Laws of the United States.

IV.

Plaintiff has been for many years and is now engaged in the manufacture and sale of refrigerating equipment.

V.

Defendant has asserted and continues to assert ownership of and the right to sue for infringement of United States Letters Patent No. 2,219,393, issued October 29, 1940, on an application filed September 19, 1938. Profert is made of a copy of said patent.

VI.

Plaintiff has been notified, in writing, by defendant's attorneys that plaintiff's manufacture and sale of refrigerating units constitute infringements of said United States Patent No. 2,219,393, and that defendant intends "to hold all parties strictly accountable for the infringement" thereof.

VII.

By reason of such acts and notifications by defendant, plaintiff has been and is being inequitably handicapped and harassed in the conduct of its said business.

VIII.

Plaintiff, upon information and belief, avers that said patent No. 2,219,393 is invalid and void because the applicant therefor was not the original and first inventor of the alleged invention described and claimed therein, but the same, in all its material and substantial parts, was invented, known to and used by others in this country before his alleged invention or discovery thereof; was patented and described in printed publications in this and foreign countries before his alleged invention or discovery thereof, or more than two years prior to his application for patent; and was in public use and on sale in this country for more than two years prior to his said application.

(a) The patents and printed publications above referred to, in so far as they have at present been ascertained, are as follows:

<u>Patentee</u>	<u>No.</u>	<u>Issue Date</u>	<u>Appln. Filed</u>
Newman	389,098	Sept. 4, 1888	Nov. 5, 1887
Brassert	958,471	May 17, 1910	Dec. 9, 1908
Wittenmeier	988,613	Apr. 4, 1911	Oct. 26, 1910
Gayley	1,002,576	Sept. 5, 1911	Jan. 14, 1909
[3]			
Payne	1,045,433	Nov. 26, 1912	Aug. 17, 1910
Jauvert	1,496,676	June 3, 1924	Mar. 31, 1924
Wenzel	2,097,851	Nov. 2, 1937	Apr. 22, 1935
Jensen	Fr.800,640	July 15, 1936	Apr. 12, 1935

Ice and Refrigeration, October, 1907, pages 126-130, article prepared by Ice and Refrigeration entitled "Cooling Public Rooms in a Chicago Hotel".

Ice and Refrigeration, October, 1910, pages 147-151, article prepared especially for Ice and Refrigeration entitled "Refriegation in the Blackstone Hotel".

(b) The instances of prior invention, prior knowledge and use by others, and prior public use and sale, above referred to, in so far as they have at present been ascertained, are as follows:

- (1) The patentees of the patents above set forth in (a), and their respective assignees, licensees and customers, at their respective places of business in the United States.

- (2) Polar Ice & Fuel Co., Indianapolis, Indiana.
- (3) Hayes Brothers, Inc., 236 West Vermont Street, Indianapolis, Indiana.
- (4) Charles E. Martin, 921 College Avenue, Indianapolis, Indiana.
- (5) Illinois Steel Co., South Chicago, Illinois.
- (6) Carnegie Steel Company, Etna, Pennsylvania.
- (7) Northwestern Iron Company, Mayville, Wisconsin.
- (8) Swift & Company, Elmira, New York.
- (9) Trullinger & Eustice Company, Yamhill, Oregon.

Plaintiff further avers that there may be other instances of prior patenting, publication, invention, knowledge and use as yet unknown to plaintiff, of which, when ascertained, plaintiff begs leave to advise the Court by amendment of this complaint. [4]

Wherefore, plaintiff prays:

(a) That a summons issue directed to the defendant commanding it to appear herein and answer the allegations contained in the foregoing complaint and to abide by and perform such orders and decrees as this Court may make in the premises;

(b) That this Court enter a declaratory decree or judgment, adjudging that said United States Letters Patent No. 2,219,393 is invalid and void.

(c) That an injunction issue perpetually enjoining the defendant, its officers, agents and employees, or any of

them, or anyone in privity with them, or any of them, from bringing or prosecuting, or threatening to bring or prosecute, any civil action charging infringement of said Letters Patent No. 2,219,393 against plaintiff, its agents, subsidiaries, vendees or others in privity with it or them;

(d) That this cause be expedited in every way consistent with equity and justice;

(e) That defendant be decreed to pay the costs and disbursements of this suit; and

(f) That the Court grant such other and further relief as shall be just.

YORK CORPORATION

By MESERVE, MUMPER & HUGHES and  
H. CALVIN WHITE

By Shirley E. Meserve

Its Attorneys

Of Counsel:

ALEXANDER C. NEAVE of

FISH, RICHARDSON & NEAVE

20 Exchange Place, New York 5, N. Y.

Received a copy of the within amended complaint this 6th day of March, 1945. Lyon & Lyon and Lewis E. Lyon, by Lewis E. Lyon, Attorneys for Defendant.

[Endorsed]: Filed Mar. 7, 1945. [5]

[Title of District Court and Cause]

ANSWER AND CROSS-COMPLAINT OF DEFENDANT, REFRIGERATION ENGINEERING, INC.

Comes now the defendant, Refrigeration Engineering, Inc., and answering the complaint herein and complaining of plaintiff, and for cause of action for infringement of United States Letters Patent No. 2,219,393, states and alleges:

I.

Defendant admits the allegations of paragraphs I, II, III, IV, V and VI of the complaint herein.

II.

Defendant denies the allegation of paragraph VII and denies that by reason of any act or acts or notifications by defendant that plaintiff has been and is being inequitably handicapped and harassed in the conduct of its business. [6]

III.

Defendant denies each and every of the allegations of paragraph VIII of the complaint herein.

Wherefore, defendant, Refrigeration Engineering, Inc., denies that plaintiff is entitled to the relief prayed for in its Amended Bill of Complaint for Declaratory Judgment and prays that the same be dismissed with defendant's costs in this case sustained and for such other and further relief as to the Court may seem just.

CROSS-COMPLAINT FOR INFRINGEMENT OF  
LETTERS PATENT NO. 2,219,393

(a) Comes now defendant and cross-complainant, Refrigeration Engineering, Inc., and for cause of action against plaintiff cross-defendant, alleges:

(b) That defendant cross-complainant is a California corporation having its principal place of business in Los Angeles, California, within the Southern District of California, Central Division.

(c) That plaintiff cross-defendant is a Delaware corporation having its principal place of business at York, Pennsylvania.

(d) That the jurisdiction of this Court as to this cause of action arises under the Patent Laws of the United States because of the infringement of United States Letters Patent No. 2,219,393 by plaintiff cross-defendant, and which infringement was carried out by plaintiff cross-defendant within the Southern District of California, Central Division, and elsewhere in the United States.

(e) That on October 29, 1940, United States Letters Patent No. 2,219,393 were duly and legally issued to defendant cross-complainant for an invention for Defrosting Device, [7] and since that date defendant cross-complainant has been, and still is, the owner of those Letters Patent.

(f) Plaintiff cross-defendant has for a long time past been, and still is, infringing those Letters Patent by making, selling and using defrosting devices embodying the



patented invention and will continue to do so unless enjoined by this Court.

(g) Defendant cross-complainant has placed the required statutory notice on all defrosting devices manufactured and sold by it under said Letters Patent and has given written notice to plaintiff cross-defendant of its said infringement.

Wherefore defendant cross-complainant demands a preliminary and final injunction against further infringement by plaintiff cross-defendant, or those controlled by plaintiff cross-defendant, and an accounting for the profits, damages and assessment costs against plaintiff cross-defendant.

LYON & LYON

By Lewis E. Lyon

811 West Seventh St.

Los Angeles 14, California

Attorneys for Defendant, Cross-Complainant,  
Refrigeration Engineering, Inc.

Received copy of the within document this 12 day of July, 1945. Meserve, Mumper & Hughes, by Bertoe Dietrich, Attorneys.

[Endorsed]: Filed Jul. 12, 1945. [8]

[Title of District Court and Cause]

## ANSWER TO CROSS-COMPLAINT

Comes now plaintiff and cross-defendant, York Corporation, by and through its attorneys of record, and in answer to the cross-complaint on file herein, admits, denies and alleges as follows:

### I.

Admits the allegations set forth in paragraph (b) of the cross-complaint.

### II.

Admits the allegations alleged and set forth in paragraph (c) of said cross-complaint.

### III.

Denies each, all and every of the allegations alleged and set forth in paragraph (d) of said cross-complaint, except that plaintiff and cross-defendant admits that the cause or causes of action in the entitled proceeding arise under the Patent Laws of the United States. [9]

### IV.

Plaintiff and cross-defendant denies each, all and every of the allegations contained in paragraph (e) of the cross-complaint on file herein, and in further answer thereto, re-alleges all of the allegations of paragraph VIII of the amended complaint on file herein.

### V.

Denies each, all and every of the allegations alleged and set forth in paragraph (f) of the cross-complaint.

VI.

Plaintiff and cross-defendant admits having received written notice from defendant and cross-complainant of alleged infringements of the patent in suit. Plaintiff and cross-defendant is without knowledge or information sufficient to form a belief as to the truth of the allegations of cross-complainant as set forth in paragraph (g) of said cross-complaint other than the giving of notice, and on said grounds denies each, all and every of the allegations in said paragraph contained.

Wherefore, plaintiff and cross-defendant prays that the cross-complaint be dismissed with costs to it, and that the court grant such other and further relief as may be just and proper.

MESERVE, MUMPER & HUGHES and  
H. CALVIN WHITE

By Shirley E. Meserve

Attorneys for Plaintiff and Cross-Defendant  
York Corporation

Of Counsel:

ALEXANDER C. NEAVE of  
FISH, RICHARDSON & NEAVE

20 Exchange Place, New York 5, N. Y.

Received a copy of the within answer to cross-complaint this 14th day of August, 1945. Lyon & Lyon, Frederick S. Lyon, Attorneys for Defendant and Cross-Complainant.

[Endorsed]: Filed Aug. 14, 1945. [10]

[Title of District Court and Cause]

## OPINION

Oral Opinion of District Court Judge Peirson M. Hall  
Delivered September 27, 1946 (Reporter's Transcript  
of Proceedings, p. 1518, Lines 9-21)

The Court: From the evidence, and from the law, as I understand it, I think that claim 1 is void, and 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 14. I think 13 is the only claim which has the entire combination for constantly maintaining temperatures in a room below the freezing point of water, and is valid, and that will be the judgment of the court.

As to infringement, I think that I will have to hold that the patent was infringed by the plaintiffs, because if you are correct in your contention concerning infringement, then no claim of the patent would be valid, and I have held claim 13 valid, because it is the only claim which describes all of the elements of the combination. For that reason I will hold that the patent has been infringed. [11]

[Title of District Court and Cause]

## FINDINGS OF FACT AND CONCLUSIONS OF LAW

At the conclusion of the trial on September 27, 1946, during and at the conclusion of the oral arguments presented, the Court having expressed its conclusion and opinion, the same by reference, together with and supplemented by the following Findings of Fact and Conclusions of Law, are hereby adopted by the Court as its findings of fact and conclusions of law pursuant to Rule 52 of the Rules of Civil Procedure:

### FINDINGS OF FACT

1. Plaintiff, York Corporation, is a Delaware corporation having a place of business at York, Pennsylvania, and filed its complaint for declaratory judgment in this cause of action January 8, 1945. [12]

2. Defendant, Refrigeration Engineering, Inc., is a California corporation having its place of business at Los Angeles, California, and is the owner of all right, title and interest in and to United States Letters Patent No. 2,219,393.

3. An actual controversy existed between plaintiff and defendant with respect to the validity of United States Letters Patent No. 2,219,393 and as to the infringement of said Letters Patent by plaintiff by virtue of plaintiff's manufacture and sale of the defrosting device exemplified by the stipulation, Defendant's Exhibit CC and the structure as therein identified as "Unit sold to private concerns" and the drawings thereto attached

and made a part of such stipulation and illustrating the said unit.

4. That thereafter, to wit, on June 12, 1945, defendant, Refrigeration Engineering, Inc., filed its answer and cross-complaint for infringement of said Letters Patent No. 2,219,393, asserting infringement of said Letters Patent by plaintiff, York Corporation, by virtue of the manufacture and sale of said "Unit sold to private concerns" as exemplified, described and illustrated in the said stipulation, Defendant's Exhibit CC.

5. That thereafter plaintiff filed its answer to said cross-complaint denying infringement of said Letters Patent and asserting invalidity of the said Letters Patent No. 2,219,393.

6. That the patent in suit is predicated upon the discovery of a device for the defrosting of refrigerating coils within a refrigerated space maintained at temperatures below the freezing point of water wherein the means for delivery of the water to and the means for withdrawal of the water from the refrigerating space are self-draining so that the water may be periodically sprayed over the refrigerating coils to remove the accumulated frost therefrom utilizing the specific heat of the water to melt the frost and removing the water from the re- [13] refrigerated space through the said self-draining means in such a manner as to avoid freezing of the water within the refrigerated space.

7. The invention of the patent in suit solved a problem long existent in the refrigerating art by the utilization of water as a means for carrying the heat into the refrigerated space to melt the frost therein, and removing the frost and water from the refrigerated space,

providing a simple, inexpensive and efficient means of solving this problem.

8. That the invention of the patent in suit utilized water at ordinary tap temperatures for defrosting in a manner which was believed by those skilled in the art to be impossible of performance.

9. That upon introduction of the invention of the patent in suit to the art, the engineers in the art did not believe that the device of the McAdam patent in suit would function to defrost coils within a refrigerated space maintained below the freezing point of water and it was necessary for defendant corporation to give guarantees of satisfaction in order to make installations of devices embodying the invention of the Letters Patent in suit.

10. That the teachings of the published art and belief of the engineers in the art prior to the McAdam invention was that water could not be used for the defrosting of coils positioned within the refrigerated space maintained at a temperature below the freezing point of water.

11. That prior to the advent of the McAdam invention of Letters Patent No. 2,219,393 the art had utilized as one method of defrosting a brine spray unit which required the maintenance of a brine solution made up of water and salt such as calcium or sodium chloride which was sprayed over coils in a [14] closed circulation system requiring the operator to maintain a specific concentration of salt within the brine solution during defrosting and a periodical addition of salt to the solution as the solution was diluted by the melting of frost from the coils. Such system was not self-draining and the purpose of the use of the salt was to avoid freezing of the solution containing the salt.



12. That upon introduction of the device of the McAdam patent in suit, and only after proof of its operation by actual demonstration, the art extensively adopted the system of water defrost of the McAdam patent.

13. That the system of water defrost of the McAdam patent in suit superseded other devices for defrosting, making it impossible for plaintiffs to locate a brine spray system to locate to the Court.

14. Defendant has licensed a considerable number of concerns manufacturing and selling refrigeration equipment throughout the United States of America to utilize the invention of the patent in suit.

15. That during the Second World War the different branches of military services specified, with no alternate, this system of water defrost in the manufacture and sale of below freezing refrigeration for use by the Armed Forces, which is admittedly the most satisfactory means which could have been utilized by the Armed Services.

16. That the invention of the McAdam Patent No. 2,219,393 has had wide commercial success after overcoming the initial resistance of the refrigeration engineers and that said commercial success has not in any way been due to advertising by defendant.

17. The prior art does not disclose any knowledge of the use of a system of defrosting utilizing water within a [15] refrigerated space maintained below the freezing point of water but, on the contrary, the teaching of the prior art is that water could not be so used.

18. That it required the exercise of inventive faculty to invent the combination as defined by Claim 13 of the Letters Patent No. 2,219,393.



19. That the combination disclosed and defined in and by Claim 13 of Letters Patent No. 2,219,393 was novel and useful and that the said claim is not anticipated by anything existing in the prior art.

20. That plaintiff has not sustained the burden of proof of establishing either prior manufacture, use, sale or knowledge of the invention of the McAdam patent in suit.

21. In the Gayley dry blast process, the subject of the depositions taken in Pittsburgh, Pennsylvania, and Chicago, Illinois, it is not established that the systems were self-draining, but on the contrary the pipes for spraying water over the coils were horizontally disposed as were the pipes leading into and from the chamber containing the said coils.

22. In the Gayley dry blast process, it is not established that the temperatures within the chambers containing the coils were maintained below the freezing point of water, but, on the contrary, it is established that the temperatures within the chambers during the period of defrosting were above the freezing point of water.

23. In the Gayley dry blast process, it is established that in order to avoid maintaining the chambers containing the coils below freezing, refrigerant was withdrawn from the coils before defrosting and that the temperature of the refrigerant so withdrawn was above the freezing point of water. [16]

24. In the Gayley dry blast process it is established that the time required for defrosting the coils in the Gayley system was such as to permit the temperature of the space containing the refrigerating coils to rise above the freezing point of water.

25. In the Gayley dry blast process it is established that there is not provided a refrigerating coil positioned within a refrigerated space which is required to be maintained below the freezing point of water.

26. In the Gayley process during defrosting the refrigerating coils were effectively isolated from the refrigerating system by the closing of doors to prevent the circulation of air and this made certain that the temperature within the space containing the coils would rise above the freezing point of water.

27. That the use of the Gayley process did not teach the refrigeration art that water could be utilized for defrosting refrigerating coils positioned within a refrigerated space maintained at temperatures below the freezing point of water.

28. That the installation known as the "Polar Ice installation" and concerning which the depositions were taken in Indianapolis, Indiana, does not anticipate the Letters Patent in suit and does not disclose the invention thereof.

29. That the installation, the subject matter of the depositions taken in Indianapolis and referred to as the "Polar Ice installation" was not so constructed as to provide for self-draining of the water but, on the contrary, it was established that the pipes were so installed as to prevent self-draining.

30. That the installation, the subject matter of the depositions taken in Indianapolis and referred to as the "Polar Ice installation" was not used, nor was it adapted for use, within a refrigerated space maintained below the freezing point of water. [17]

31. The installation, the subject matter of the depositions taken in Indianapolis and referred to as the "Polar Ice installation" was discarded and abandoned and no other like system was ever installed or used by those interested in or instrumental in its construction and attempted use.

32. The depositions taken at Indianapolis concerning the "Polar Ice installation" do not establish prior invention, manufacture, use or sale of a water defrosting system anticipating the invention of the McAdam patent in suit.

33. The depositions taken at Elmira, New York, concerning the Swift & Company installation do not establish prior manufacture, use, sale or knowledge of the invention of the McAdam Patent No. 2,219,393 in suit.

34. The depositions taken at Elmira, New York, concerning the Swift & Company installation do not establish the use of a system of water defrosting in a refrigerated space maintained below the freezing point of water.

35. The depositions taken at Elmira, New York, concerning the Swift & Company installation do not establish that the system was self-draining but, on the contrary, establish that the system as installed and used was not self-draining.

36. That the depositions taken at Elmira, New York, concerning the Swift & Company installation established that Swift & Company operated a below freezing storage room for holding meat at temperatures below the freezing point of water and that in connection with such installation, Swift & Company did not use the system of

water defrosting as disclosed in the McAdam patent in suit, but utilized a different system of defrosting refrigerating coils within the room which required removing all frozen products from the room permitting temperature of the room to rise above the freezing point of water during defrosting. [18]

37. In the depositions taken at Portland, Oregon, and concerning which installation the witness W. C. Hulse, testified before this Court, and referred to as the "Yamhill installation", it is not established that said installation was either made, used or sold, or that those taking part in the said installation or use had knowledge of the invention of the McAdam patent in suit, No. 2,219,393.

38. It is established that the said "Yamhill installation" was an abandoned experiment which was never repeated, no like installation was ever made by those interested in this attempted use and did not teach the art the system of water defrost as set forth in the McAdam Patent No. 2,219,393.

39. In conjunction with the refrigeration machinery installed at Yamhill, Oregon, several different methods of defrosting were attempted unsuccessfully and later abandoned, with the result that the system now utilized at Yamhill, Oregon, was the older system of hot air defrosting requiring the blowing of air over the coils to melt the frost therefrom, which results in a rise in temperature of the refrigerated space.

40. In conjunction with the different methods of defrosting attempted to be used at Yamhill, Oregon, it is established that during attempts to utilize water for defrosting the refrigerating coils were positioned outside of the refrigerated space.

41. In conjunction with the several different methods of defrosting which were attempted to be used at Yamhill, Oregon, it is not established that the temperature within the space in which the refrigerating means were operated was maintained below the freezing point of water.

42. In conjunction with the Yamhill installation, it is established that the attempt to use water for the purpose of defrosting was unsatisfactory. [19]

43. It is established that the refrigeration machinery installed at Yamhill, Oregon, was not paid for by the owners thereof, Eustice and Trullinger, during the attempt to utilize water for the purpose of defrosting.

44. While water was attempted to be used at the Yamhill, Oregon, installation, it is established that the refrigerated coils were isolated from the refrigerated space of the Eustice and Trullinger locker room during attempts to defrost the coils thereof by closing doors over the inlet and outlet to the coil containing space with the result that the temperature within the coil housing was not maintained below freezing during defrosting.

45. In conjunction with the Yamhill installation, it is established that the attempt made to utilize water for defrosting of this system was forgotten by those interested in the installation, that a similar installation was never made at any other place, although the witnesses who testified concerning this attempted installation testified that the problem of defrosting still remained acute after such installation was discontinued.

46. In conjunction with the Yamhill installation, it is not established when the attempt was made to utilize water for defrosting or when the attempt was discon-

tinued, but it appears that the records of both of these facts were in possession of plaintiff's witnesses and were not produced by plaintiff.

47. In conjunction with the Yamhill installation, the Court finds that the witness, W. C. Hulse's testimony was not worthy of belief and the Court observed his manner and demeanor while giving his testimony before the Court, and his testimony was found to be impeached upon material grounds. [20]

48. That claims 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 and 14 of the McAdam patent in suit do not define the complete invention as disclosed therein.

49. That Claim 13 of the McAdam Patent No. 2,219,393 in suit defines the invention made by McAdam disclosed in said Letters Patent in suit.

50. That it was stipulated by counsel for plaintiff and defendant that under the provisions of Section 68 U. S. C. Title 35, that this Court does not have jurisdiction to determine the question of infringement of the structures manufactured and sold to the United States Government as such structures are identified and set forth under the title of "Description of Government Sales, Unit V-30" in the stipulation, Defendant's Exhibit CC.

### CONCLUSIONS OF LAW

1. That Letters Patent in suit were duly and legally issued on October 29, 1940, to Refrigeration Engineering, Inc., defendant, and that defendant is the owner of the entire right, title and interest in and to the Letters Patent in suit, together with any and all rights of action, claims or demands arising out of or accruing from past infringement thereof.



2. The patent in suit is good and valid in law as to Claim 13 thereof, and covers a new and meritorious invention entitling the patent to a liberal interpretation.

3. Claims 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 and 14 of the Letters Patent in suit are invalid as not defining the entire invention of the McAdam patent.

4. Plaintiff has infringed Claim 13 of the Letters Patent in suit by the manufacture and sale of the "Unit sold to private concerns" as exemplified by and set forth in the stipulation, Defendant's Exhibit CC. [21]

5. That defendant is entitled to a judgment for an injunction and accounting with costs and attorney's fees as prayed for in defendant's cross-complaint filed herein.

6. That the injunction and accounting should be stayed pending appeal by plaintiff from the judgment entered herein and until said appeal is determined, dismissed, or until the time for such appeal has lapsed.

PEIRSON M. HALL

United States District Judge

Mar. 7

Dated: ~~October~~ 24, 1946.

Approved as to Form as provided in Rule 8. ....  
....., Attorneys for Plaintiff; Lyon & Lyon,  
by Lewis E. Lyon, Attorneys for Defendant.

Due service and receipt of a copy of the within Findings of Fact & Concl. of Law is hereby admitted this 21st day of October, 1946. Meserve, Mumper & Hughes and Alexander C. Neave, by Shirley E. Meserve, Attys. for Plaintiff.

[Endorsed]: Lodged Nov. 7, 1946.

[Endorsed]: Filed Mar. 24, 1947. [22]

In the United States District Court  
Southern District of California  
Central Division

Civil Action No. 4166-PH

YORK CORPORATION,

Plaintiff,

vs.

REFRIGERATION ENGINEERING, INC.,

Defendant.

### JUDGMENT

This cause having come on to be heard, and the Court having made and entered its Findings of Fact and Conclusions of Law pursuant to Rule 52 of the Rules of Civil Procedure, it is hereby Adjudged and Decreed as follows:

(1) That defendant is the owner of the entire right, title and interest in and to Letters Patent No. 2,219,393, granted October 29, 1940, to Harry McAdam, for Defrosting Device, together with all rights of action for past infringement thereof.

(2) That said Letters Patent, and Claim 13 thereof, is good and valid in law.

(3) That Claims 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 and 14 of said Letters Patent are invalid and void as failing to define the entire combination of the invention of the McAdam patent. [23]

(4) That the Complaint herein be dismissed.

(5) That defendant have judgment on its Cross-Complaint for infringement of Letters Patent No. 2,219,393 as prayed for.



(6) That a perpetual injunction be issued out of and under the seal of this Court, restraining the plaintiff, its officers, agents, servants, employees and attorneys, and those persons in active concert or participation with them, from using or causing to be used, or offering or threatening to use, or contributing to the use of, the devices patented in and by said Letters Patent No. 2,219,393, and particularly Claim 13 thereof, reading as follows:

“13. In combination with a refrigerated space, a coil adapted for periodic defrosting, a spray-head positioned to distribute water over said coil for defrosting thereof, a fan to move air of said space over said coil adapted to be discontinued during defrosting periods whereby the air of said space does not rise above the freezing point of water during the defrosting period, a drip pan disposed below said coil to receive water and ice gravitating from said coil, a self-draining conduit leading from said drip pan to points remote from said space, and an inclined water supply conduit leading from a point remote from said space to said spray-head; said water supply conduit at said remote point provided with an opening normally open to the atmosphere whereby the conduit and spray-head respectively are self-draining, and means for periodically supplying water to said supply conduit during period when said fan is inoperative.”

and from in any way infringing upon said Letters Patent or upon the rights of the defendant under said Letters Patent.

(7) That defendant recover from the plaintiff [24] general damages which shall be due compensation for

making, using, or selling the invention not less than a reasonable royalty therefor, together with such costs and interest as may be fixed by the Court and together with reasonable attorney's fees to be determined by the Court.

(8) That this cause be referred to David B. Head, Esquire, as a Special Master, to take and report to the Court an account of the said compensation due defendant and determine reasonable attorney's fees to be allowed defendant in this cause.

(9) That defendant recover its costs herein from plaintiff in the amount of \$744.70 to be taxed.

(10) That the injunction provided for in Paragraph 6 hereof, and that the accounting and reference for accounting as provided for in Paragraphs 7 and 8 hereof, be stayed pending appeal by plaintiff of this judgment or for the statutory period of time within which such appeal may be taken and if taken, until the determination of this cause by the Appellate Court or the dismissal of the said appeal.

PEIRSON M. HALL

United States District Judge

Mar. 7

Dated: ~~October~~ 24, 1946.

Approved as to Form as provided in Rule 8. ....  
....., Attorneys for Plaintiff. Lyon & Lyon,  
by Lewis E. Lyon, Attorneys for Defendant.

Judgment entered Mar. 24, 1947. Docketed Mar. 24, 1947. C. O. Book 42 page 276. Edmund L. Smith, Clerk; by J. M. Horn, Deputy.

[Endorsed]: Lodged Nov. 7, 1946.

[Endorsed]: Filed Mar. 24, 1947. [25]

[Title of District Court and Cause]

## NOTICE OF APPEAL

Notice is hereby given that Refrigeration Engineering, Inc., defendant-cross-complainant, hereby appeals to the Court of Appeals for the Ninth Circuit from the parts of the Judgment entered in this action on March 24, 1947 which adjudges:

“(3) That Claims 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 and 14 of said Letters Patent are invalid and void as failing to define the entire combination of the invention of the McAdam patent.”

Dated: April 22, 1947.

LYON & LYON

By Lewis E. Lyon

Attorneys for Appellant

Due service and receipt of a copy of the within Notice of Appeal is hereby admitted this 22nd day of April, 1947. Meserve, Mumper & Hughes, by Shirley E. Meserve, Attys. for Plaintiff.

[Endorsed]: Filed & mld. copy to Meserve, Mumper & Hughes & H. Calvin White Apr. 22, 1947. [26]

[Title of District Court and Cause]

PLAINTIFF'S NOTICE OF APPEAL

Plaintiff, York Corporation, hereby files notice, this 23rd day of April, 1947, that it appeals to the United States Circuit Court of Appeals for the Ninth Circuit from paragraphs numbered (2) and (4) to (9) inclusive of the Judgment entered herein on March 24, 1947.

MESERVE, MUMPER & HUGHES and  
H. CALVIN WHITE

By Shirley E. Meserve

Attorneys for Plaintiff.

Of Counsel:

ALEXANDER C. NEAVE of

FISH, RICHARDSON & NEAVE

20 Exchange Place, New York 5, N. Y.

Received copy of the within Plaintiff's Notice of Appeal this 22nd day of April, 1947. Lyon & Lyon, by  
....., Attorneys for Defendant.

[Endorsed]: Filed & Mld. copy to Lyon & Lyon  
(Lewis E. Lyon) Apr. 23, 1947. [27]

[Title of District Court and Cause]

CORRECTED STIPULATED DESIGNATION OF  
CONTENTS OF RECORD ON APPEAL

It Is Hereby Stipulated and Agreed, subject to the approval of the Court, that the following shall constitute the record on appeal: [28]

\* \* \* \* \*

It is hereby further stipulated and agreed that the District Court, pursuant to Rule 75(i), be requested to enter an order that the original exhibits herein designated should be available for inspection by the Appellate Court and should therefore be sent to the Appellate Court in lieu of copies, and that the District Court may upon this consent make such order therefor and for the safekeeping, transportation, and return thereof as it deems proper.

It is further stipulated that this Corrected Stipulated Designation of Contents of Record on Appeal may be substituted for and in place of the stipulation heretofore entered dated April 22, 1947.

Dated: May 20, 1947.

MESERVE, MUMPER & HUGHES and  
H. CALVIN WHITE

By Shirley E. Meserve  
Attorneys for Plaintiff

LYON & LYON

By Lewis E. Lyon W

Attorneys for Defendant

Of Counsel:

ALEXANDER C. NEAVE of  
FISH, RICHARDSON & NEAVE

20 Exchange Place, New York 5, New York

[Endorsed]: Filed May 22, 1947. [29]

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[Title of District Court and Cause]

ORDER WITH RESPECT TO STIPULATED  
DESIGNATION OF CONTENTS OF REC-  
ORD ON APPEAL

On motion of the parties hereto, it is Ordered as follows:

1. The attached Stipulated Designation of Contents of Record on Appeal is hereby approved.

2. All original exhibits in this case shall be duly certified by the Clerk of this Court and sent to the Appellate Court in lieu of copies as part of the record on appeal as requested in said Stipulated Designation.

Apr.

Dated ~~May~~ 23, 1947.

PEIRSON M. HALL  
U. S. D. J.

Approved as to form: Shirley E. Meserve, Attorney for Plaintiff; Lewis E. Lyon, Attorney for Defendant.  
4-22-47.

[Endorsed]: Filed Apr. 24, 1947. [30]

## [DOCKET ENTRIES]

4166-PH Docket

Title of Case    York Corporation v. Refrigeration Engineering, Inc.

Attorneys

For Plaintiff:    Meserve, Mumper & Hughes and H. Calvin White

For Defendant:    Lyon & Lyon, Lewis E. Lyon

For declaratory judgment on patent

Date	Plaintiff's Account	Received	Disbursed
1- 8-45	Meserve, Mumper & Hughes	16.00	
4-11-45	Trea's T 4		15.50
4-23-47	Cromwell Warne, Jr.	5.00	

Date	Defendant's Account	Received
4/27/47	Lyon & Lyon—Not. App.	5.00

Date	Filings—Proceedings
1/ 8/45	Fld compl for declaratory jgt re patent. Issd summons, Made Report J. S. 5. Md. patent report to Comr Patents. Clerk's Fees, Plaintiff 15.50
1/39/45	Fld dfts mot for b/p with not mot ret 2/26/45 & pts & auths.
2/21/45	Fld plf's memo in oppos to dft's mot for particulars. Fld affid of serv.
2/26/45	Ent procs & ord cont to 4/30/45, 10 AM on stip of counsel for hrg on mo of deft for B/P.

Date	Filings—Proceedings
3/ 7/45	Fld amended compl.
3/13/45	Fld stip & ord thereon plfs amended compl. be fld; mot for partic be deemed directed to amend compl; & deft hv to & inc 20 days aft serv B/P or denial to plead.
3/16/45	Fld. stip & ord allow flg of amend compl, etc. & ext dft's time to plead to amend compl to 20 days aft plf has serv & fld b/p or mot for b/p is denied.
3/20/45	Fld depos of F. C. Barton, et al & plf's exhs 13 to 29 incl & dft's exh A.
3/21/45	Fld depos of Louis V. Smith, et al & plf's exhs 38 to 42 incl, 43-A & 43-B, 44 & 45. Amount Reported in Emoulment Returns 15.50.
4/27/45	Fld stip & ord thereon hrg mot deft for partic be contd to 5/14/45.
5/14/45	Ent procs & ord cont to 5/28/45, 10 AM for hrg on deft's mo for B/P.
5/26/45	Fld not withdrawal by deft of mot for B/P.
5/28/45	Ent procs & ord striking from cal hrg on deft's mo for B/P.
6/ 6/45	Fld stip & ord ext time dft to ans to & incl 6/23/45.
7/ 3/45	Fld depositions Frank C. Bauer, A. Raphael Kernan, Jesse O. Brandt, William Swope, Edward G. Kennedy, Edward Harkins, taken on behalf plf 2/9/45; & fld exhs to depos 1, 2A, 2B, 3, 4, 5, 6A, 6B, 7, 8, 9, 11, 12. [33]



Date	Filings—Proceedings
7/ 6/45	Fld plfs exh 10 to depositions Frank C. Bauer et al htf fld on 7/3/45.
7/12/45	Fld <u>answer</u> & Cross-compl deft Refrigeration Engineering, Inc.
7/27/45	Fld depositions of Nicholas L Tominac, Albert Gaide, Herman L. Lietz, Alfred E. Mueller, tkn at Chicago, Ill., Feb. 16, 17, 1945, with Plf's exhs. 30, 30-A, 31, 32, 33, 34, 35, 36-A-I & 37 thereto.
8/14/45	Fld plfs. <u>answer</u> to cross-compl.
8/18/45	Fld not takg deposition F. L. Trullinger et al.
9/10/45	Ent procs & ord cont to 10/8/45, 10 a. m., for settg for trial.
10/22/45	Ent procs & ord striking from cal.
11/10/45	Fld in 1 vol depositions Fred L. Trullinger, C. W. Eustice, Anton Broms, Mark A. Postlewaite, taken beginning 8/21/45. Fld plfs exs Y-1 to 27 inc with depositions.
12/10/45	Fld summons ret unexecuted.
2/ 4/46	Ent procs & ord settg for trial 5/21/46, 10 AM and for pretrial hrg 3/11/46, 2 PM.
2/20/46	Ent ord vacating pre-trial date 3/11/46 & trial date 5/21/46 & contg to 5/6/46, 10 AM for re-settg. Mld copies of M/O to counsel.
3/15/46	Fld stip of facts.
5/ 6/46	Ent. procs & ord settg for trial on 9/17/46, 10 AM. Counsel waive notice.

Date	Filings—Proceedings
8/ 9/46	Fld not of takg depos of C. W. Hulse, tkn 8/20/46.
8/16/46	Fld stip and ord that plf's exbs Y-1 and Y-27 incl. be removed from files for use of plf's counsel for tkg depos.
9/ 5/46	Fld plf's pre-trial brief.
9/16/46	Fld deft's pre-trial brief.
9/17/46	Ent proc on trial & ent ord cont to 10 AM 9/18/46 for fur trial. Sw 1 deft's wits. Fld 20 defts exbs. Fld 1 plf's exb.
9/18/46	Ent procs for trial & ent ord cont to 9/19/46, 10 AM for fur trial. Sw 7 wits. for deft & cross-clmt. Fld 11 deft & cross-clmt's exbs. [34]
9/19/46	Ent procs fur trial & ent ord cont fur trial herein to 10 AM 9/20/46. Sw 2 deft & cross-clmts. wits. Fld 1 defts exb. Read depos of 3 plf's wits.
9/20/46	Fld depos of C. W. Hulse tkn 8/20/46 & plf's exb Y-28 thereto. Fld depos of C. W. Hulse, tkn 8/23/45. Ent procs on fur trial & ent ord cont to 10 AM 9/24/46 for fur. procs on trial. Read depos of 11 wits into record. Fld 38 exbs of plf.
9/24/46	Ent procs fin. trial & ent ord cont to 10 AM 9/25/45 for fur trial. Read depos of 6 wits. in behalf of plf.

Date	Filings—Proceedings
9/25/46	Ent procs fur trial & ent ord cont to 10 AM 9/26/46 for fur. procs on trial. Read depositions of 2 wits. for plf. Sw 3 plf's wits. Fld 27 exbs for plf.
9/26/46	Ent procs fur trial & ent ord cont to 10 AM 9/27/46 for fur procs on trial. Fld 7 plf's exbs. Sw 2 deft's re-buttal wits. Sw 1 plf's rebuttal wit. Fld 2 defts exbs.
9/27/46	Ent procs fur trial & ent ord that judgmt be ent to the effect that Claims 1 to 12, incl & claim 14 are void, that Claim 13 is valid, & that pat in suit has been infringed by plf. Ent fur ord susp accountg until dispos of appeal, that counsel for deft & cross-claimt. prepare formal Findings of Fact & Conclusions of Law & Decree, servg. same upon plf as expeditiously as possible & that plf have 30 days after service thereof in which to file its objecs. thereto & that provisions for injunctive relief be susp until final dispos of appeal or appeals. Fld list of Exhibits.
9/30/46	Fld. rptrs. trans. of proceedgs on trial dtd 9/17/46; 9/18/46; 9/19/46; 9/20/46; 9/24/46; 9/25/46; 9/26/46; 9/26/46; 9/27/46.
10/ 3/46	Fld rptrs trans of proc dtd 9/17/46 to 9/27/46 incl. of trial, dup heretofore fld 9/30/46.
11/ 7/46	Lodged Findgs of Fact and Concls of Law. Lodged jdmt.

Date	Filings—Proceedings
11/13/46	Fld stip and ord extendg time of plf to prepare, serve and present its objs to defts findgs of fact and concls of law and jdnt and to prepare, serve and present its proposed findgs of fact and concls
11/13/46	(Continued) of law and jdmt to & includg 11/30/46.
11/29/46	Lodged Plf's proposed findings, concls and judg.
1/27/47	Fld as of 1-21-47 plf's memo on findings of fact & concls law.
3/24/47	Ent ord flg & fld Findgs of Fact & Concls of Law & fld & ent COB 42/276 Jgmt purs thereto that deft is owner of entire right, title, & int in & to Letters Pat #2,219,393, together with all rights of action for past infringement thereof; that Clm 13 thereof is good & valid in law; t at Clms 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, & 14 thereof are invalid & void; that compl be dismed; that deft hv jgmt on its cross-compl for infring of said Letters Pat.; that a perpetual injunc be issd restrng plf, etc & partic Clm 13 thereof that deft recover from plf gen dmges due for making, selling, & using invention not less than a reasonable royalty therefor, together with costs & int as may be fixed by Court &

Date	Filings—Proceedings
	reasonable attys fees to be determ by Court, that this case be referred to David B. Head, U. S. Comr, to take & rept to Court an account of compensation due deft & determ reasonable attys fees; that deft recover its costs herein from plf. that inj be stayed pendg appeal & if appeal tkn, until determ of appeal by CCA or the dimisl thereof. Dktd same. Made Report J. S. 6.
3/29/47	Fld stip & ord ent time to file cost bill to & incl 4-15-47.
4/15/47	Fld deft's memo of costs & disbursmts.
4/18/47	Fld ord re atty's fees as costs. Taxed costs favor dft at \$744.70. Dock & ent same.
4/22/47	Fld not of appeal by deft-cross-compl, mld cpies to Meserve, Mumper & Hughes & H. Calvin White. Fld stip for costs & bond on appeal.
4/23/47	Fld plfs not of appeal, mld copy to Lyon & Lyon attys for deft. [35]
4/24/47	Fld ord with resp to stip desig of contents of rec on appeal of dft-applnt. Fld stip desig of contents of rec on appeal.
4-25-47	Fld. plf. appellant's undertakg. for costs on appeal.
5/16/47	Fld stip & ord correctg rpters trans of proceedgs. [36]

[Title of District Court and Cause]

### CERTIFICATE OF CLERK

I, Edmund L. Smith, Clerk of the District Court of the United States for the Southern District of California, do hereby certify that the foregoing pages numbered from 1 to 36 inclusive contain full, true and correct copies of Amended Bill of Complaint for Declaratory Judgment on U. S. Patent No. 2,219,393; Answer and Cross-Complaint of Defendant, Refrigeration Engineering, Inc.; Answer to Cross-Complaint; Page 1518, Lines 9-21 of the Reporter's Transcript; Findings of Fact and Conclusions of Law; Judgment; Notice of Appeal; Plaintiff's Notice of Appeal; Corrected Stipulated Designation of Contents of Record on Appeal; Order with Respect to Stipulated Designation of Contents of Record on Appeal; Stipulation and Order re Reporter's Transcript and Docket Entries which, together with Original Reporter's Transcript and Original Exhibits, transmitted herewith, constitute the record on appeal to the United States Circuit Court of Appeals for the Ninth Circuit.

I further certify that my fees for preparing, comparing, correcting and certifying the foregoing record amount to \$6.10, one-half of which has been paid by each of the parties.

Witness my hand and the seal of said District Court this 29 day of May, A. D. 1947.

(Seal)

EDMUND L. SMITH.

Clerk,

By Theodore Hocke,  
Chief Deputy Clerk.

[Title of District Court and Cause]

Honorable Peirson M. Hall, Judge Presiding

REPORTER'S TRANSCRIPT OF PROCEEDINGS  
ON TRIAL

Los Angeles, California, September 17, 1946

Appearances:

For the Plaintiff: Meserve, Mumper & Hughes, and  
H. Calvin White, 555 South Flower Street, Los Angeles  
13, California; by Shirley Meserve, Esq. Fish, Richard-  
son & Neave, 20 Exchange Place, New York 5, New  
York; by Alexander C. Neave, Esq., and William J.  
O'Hearn, Jr.

For the Defendant: Lyon & Lyon, 811 West Seventh  
Street, Los Angeles 14, California; by Lewis E. Lyon,  
Esq., and Charles G. Lyon, Esq. [2\*]

\* \* \* \* \*

Mr. Lewis Lyon: I will at this time offer in evidence  
as Defendant's Exhibit A, a copy of the Harry H. Mc-  
Adam patent, No, 2,219,393, granted October 29, 1940,  
for defrosting device. [11]

\* \* \* \* \*

The Court: That is in evidence as Defendant's Ex-  
hibit A.

(The patent referred to was received in evidence and  
marked Defendant's Exhibit A.) [12]

[Note: Defendant's Exhibit A will be found in the  
Book of Exhibits at page 1483.]

\* \* \* \* \*

\*Page number appearing at top of page of Original Reporter's  
Transcript.



H. T. JARVIS,

called as a witness by and in behalf of the defendant, having been first duly sworn, was examined and testified as follows:

The Clerk: Will you state your name?

The Witness: H. T. Jarvis.

The Clerk: And your address?

The Witness: 6107 South Central.

The Clerk: Los Angeles?

The Witness: That is right.

Mr. Lewis Lyon: Does your Honor desire the examination of the witnesses to be made from the pulpit. I find myself very nervous and I usually walk all over the room.

The Court: I have found that it is preferable because a person in talking to another has a tendency to talk loud enough for the other person to hear, but if you creep up here I find everyone has to ask the witness to repeat, and so [44] forth. If you will stand back there, you can hear him, and if you do not, you will remind him to talk loud enough.

I realize that there are times when you have to come up here to the diagrams and so on.

Mr. Leonard Lyon: Very well, your Honor.

#### Direct Examination

By Mr. Lewis Lyon:

Q. What is your business, Mr. Jarvis?

A. At the present time, manufacturing refrigerator coils of all types.

Q. You are an officer of Refrigeration Engineering, the defendant corporation, are you?           A. I am.



(Testimony of H. T. Jarvis)

Q. What office?

A. Vice president, general manager, and treasurer.

Q. Will you state briefly, Mr. Jarvis, your training and experience in the refrigeration art?

A. To do that I believe it might be necessary to state that I have been in the refrigeration business continually since 1937. Early in 1937 I started selling household refrigeration and graduated into apartment house type and commercial type of various applications, and until 1932 when this corporation was formed, at which time we started in to manufacture coils.

Q. You mean in 1927. [45] A. Yes, sir.

The Court: You said 1937 you began to sell refrigerators.

The Witness: I beg your pardon. It was 1927; yes, sir.

By Mr. Lewis Lyon:

Q. Proceed.

A. As I stated, I have been in the industry ever since 1927 and believe I have had experience in practically every phase of all refrigeration, as it is commonly installed today.

Q. Did you have anything to do with the formation of the defendant corporation? A. I did.

Q. When was that corporation formed?

A. I believe it was July 1932.

Q. What was the business of that corporation when it was formed?

A. The same as it is today, manufacturing of nothing but coils.

(Testimony of H. T. Jarvis)

Q. By "coils" you mean the evaporator unit of a refrigeration system?

A. Yes, sir. Coils is an industry name, and I think evaporators is the true technical name. That covers everything from a household type coil to an air conditioning coil, [46] both for high and low temperatures.

The Court: When you say "coil" you mean the entire unit? You don't mean just the things through which the fluid or gas flows?

The Witness: A coil in my terminology means a complete coil such as in your household refrigerator, with the tubes inside of the finned assembly in many instances, or plate assembly. That is a self-contained unit in which the ice trays are put.

The Court: It is a complete refrigerating unit?

The Witness: Yes, sir. In the case of the present-day blower type of coil, it is a complete unit, complete with fan and motor and necessary valves.

By Mr. Lewis Lyon:

Q. It does not, however, include the compressor or the cooling element for cooling the gas which goes to make up a complete refrigeration unit?

A. No, sir, it is only a component. There are two major components, the coil is one and the compressor is the other and the condenser is the third.

Q. What particular types of such coils does your company manufacture?

A. We manufacture household evaporators. We manufacture showcase or meat case coils. We manufacture reach-in refrigeration coils, both for high and low temperature, [47] walk-in coils, both for high and low

(Testimony of H. T. Jarvis)

temperature. We manufacture air conditioning coils in limited quantities, and we manufacture a line of evaporative condensers which is in reality a coil for replacing an old-fashioned air-cooled condenser.

Q. Are those all fin type coils?

A. Practically, yes. There are a few plain type coils used in a few meat cases up to the present time.

Q. What is a fin type coil? Will you explain it?

A. I will attempt to. A fin type coil in our industry means a series of pipes, usually copper pipes or steel pipes, on which there is a metal fin usually stamped through a punch press operation, and these fins are spaced on these tubes. In other words, the fin is dropped over a series of, say, four tubes, and there are spacers that keep them a quarter of an inch apart or half an inch apart or one inch apart. Then there is a mandrel drawn through the pipe after the fins are put in place that internally expands the tube in sufficient diameter to make a bond between the pipe and the fin which acts as a transfer of heat from the air to the tube and thence to the refrigerant and back to the condenser.

Q. What is the purpose of the fins, to add additional heat transfer surface?

A. Yes, sir, it is, and because it is much more [48] economical to supply fins than the great amount of bare pipe coil that it would take to do the same job.

Q. Prior to 1937, Mr. Jarvis, your company, in manufacturing and installing these units, of necessity had to recommend or provide some method of defrosting those units, is that correct?

A. I am sorry, Mr. Lyon. I am confused on the date.

(Testimony of H. T. Jarvis)

Q. Prior to 1937.

A. Would you read that back, please?

(The question referred to was read by the reporter, as follows:

("Q. Prior to 1937, Mr. Jarvis, your company, in manufacturing and installing these units, of necessity had to recommend or provide some method of defrosting those units, is that correct?")

The Witness: That is correct.

By Mr. Lewis Lyon:

Q. At that time what methods of defrosting were generally used in the industry?

A. There were a number of methods, namely, the brine spray unit, the hot gas defrost unit, the electric defrost unit. Those were the three most commonly used. There were some instances where manufacturers attempted to defrost with electric light globes and other means of heating.

Q. Was there or was there not the problem of defrost-  
[49] ing refrigeration units a major problem in the art of refrigeration at that time?

Mr. Neave: I object to that, your Honor. That is a conclusion on the part of the witness, not a fact.

The Court: Is this witness offered as an expert?

Mr. Lewis Lyon: He is offered from his experience as a manufacturer as an expert in that regard; yes, your Honor.

The Court: You are asking now his opinion?

Mr. Lewis Lyon: Yes, your Honor.

The Court: Objection overruled. [50]

(Testimony of H. T. Jarvis)

The Witness: A. From the day that I first became acquainted with the refrigeration industry, and to my knowledge, it was the biggest problem that the industry had to solve before the present-day frozen food industry could begin to travel.

Q. By Mr. Lewis Lyon: With what types or methods of defrosting were you personally acquainted in 1937, Mr. Jarvis?

A. Every type that I mentioned a few moments ago, namely, electric, and brine, and hot gas methods.

Q. Had you made a study of the operation of each of those systems? A. I did, in many cases.

Q. State whether or not it was as a result of your knowledge of the problems of this art that the invention of the patent in suit was developed?

A. Would you please repeat that question?

Q. Read it, please.

(The question was read.)

A. Yes, I am sure it was.

Mr. Neave: Your Honor, I must object.

The Court: Objection sustained. I don't know what your ground is, but the objection is sustained, and the answer stricken.

Q. By Mr. Lewis Lyon: When was the water defrosting system of the McAdam patent in suit first developed, Mr. Jarvis? [51] A. During 1937.

Q. Did you have anything to do with the development of that invention?

A. Only to the extent of delegating to the chief engineer the job of figuring out some means of doing the job, other than the existing methods at that time.

The Court: McAdam,—is that McAdam?

(Testimony of H. T. Jarvis)

The Witness: McAdam, yes, your Honor.

The Court: He is your chief engineer?

The Witness: Your Honor, that is true.

Mr. Neave: May I ask counsel a question?

The Court: You may.

Mr. Neave: Mr. Lyon, we have a stipulation on the dates of conception.

Mr. Lewis Lyon: I am not going to disturb that stipulation.

Mr. Neave: You are going to offer it?

Mr. Lewis Lyon: I haven't offered it yet.

Mr. Neave: I just wanted to make clear—

The Court: Are you going to offer it? Is it written?

Mr. Leonard Lyon: Yes, it is.

Mr. Neave: Yes, it is a written stipulation.

Mr. Leonard Lyon: I can offer it at a later time, your Honor. I do not have it available here. I have no objection to its being offered, and will offer it. [52]

Q. By Mr. Lewis Lyon: After the development of this method of water defrosting, will you explain, Mr. Jarvis, what you personally did to introduce this method of defrosting into the art of refrigeration?

A. Mr. Lyon, that is a long story, and, your Honor, I will attempt to be as brief as possible, and state that the first opportunity that presented itself to use this method was in the State of Oregon, and I recommended it to a locker plant to maintain zero degrees. We made four coils and shipped them to the job in question, and shortly after the job was installed I made a trip to the job site, and inspected the installation and found that we hadn't entirely solved the problem. Either through our shop, or the drawings had not been followed, or there was some-



(Testimony of H. T. Jarvis)

thing in the installation which caused three coils out of the four to not defrost properly. On careful examination I found that the water was trapped in the supply line leading to the coils in three instances, and in the fourth instance the coil would drain properly and the next day, when they tried to defrost it, the one coil would operate satisfactorily and the other three coils—well, it was necessary to go into the room with a blow torch and melt the ice inside of the supply pipe that had frozen.

That correction was made on the job by myself, and so far as I know, the job has functioned satisfactorily ever since.

The Court: When you say correction, do you mean that that [53] complied with the disclosures of the patent?

The Witness: That is correct, your Honor, and lowered the supply lines so that when the water supply was discontinued, the drain-back through the law of gravity was completed, leaving no water in the pipe to freeze.

The Court: The fault was there was not a sufficient difference between the elevation of the line and the pan of the drain pipe?

The Witness: The drain pan and the supply line, yes, sir.

Q. By Mr. Lewis Lyon: Now, following your experience with that Woodland, Oregon, job, Mr. Jarvis, I believe that you were called upon to demonstrate the operation of the water defrost at a public gathering at San Francisco; is that correct? A. That is correct.

Q. What was that gathering?

A. That gathering was a National Association of Practical Refrigeration Engineers, and they were holding,

(Testimony of H. T. Jarvis)

I believe, their national convention in San Francisco at that time.

Q. Do you recall the date of that meeting, Mr. Jarvis?

A. I am sorry, I don't believe I could call the exact date without referring to the records that I turned over to you.

Q. While I am looking for that, Mr. Jarvis, did you [54] prepare any equipment for use in that demonstration?

A. Yes, sir. I had prepared a complete system of refrigeration, a condensing unit mounted on a stand, and also a coil, complete with all valves, and in order to demonstrate the water defrost system we used a little electric pump that picked up water from a sump, and over the coil and then returned back to the sump, and the water was used over and over again.

Q. Who introduced you at that meeting?

A. Mr. Barney Goldstein, the president of the San Francisco chapter.

Q. Any one else?                      A. No, sir.

Mr. Lewis Lyon: Will you mark this? .

The Clerk: B, for identification.

The Court: What is it?

The Clerk: A letter.

(The document referred to was marked as Defendant's Exhibit B, for identification.)

Q. By Mr. Lewis Lyon: I hand you a letter dated November 3, 1939, marked Exhibit B, for identification, and ask you if you can identify that, Mr. Jarvis.

A. I can. This was the notice sent out by the Association to all its members of the forthcoming demonstration of "Freezing While Defrosting." [55]



(Testimony of H. T. Jarvis)

Q. Does that letter refresh your recollection as to the date of that meeting, Mr. Jarvis?

A. November 8, 1939. That is right.

Mr. Lewis Lyon: I will offer in evidence the letter as identified by the witness, as Defendant's Exhibit B.

The Court: What is the purpose?

Mr. Neave: Yes.

The Court: It is only offered to refresh his recollection, and his recollection has been refreshed. The other side can introduce it, but as I remember the California Code section, why, you cannot. Do you object to it?

Mr. Neave: Yes, sir.

Mr. Lewis Lyon: I will withdraw the offer at the present time.

The Court: It will remain with the clerk, for identification.

Q. By Mr. Lewis Lyon: Did you appear at that meeting, Mr. Jarvis?           A. I did.

Q. Approximately how many people were present?

A. I would estimate about 125 people.

Q. Did you make your demonstration before that Association meeting?           A. I did.

Q. Will you state what transpired? [56]

A. After the preliminary order of business, Mr. Barney Goldstein introduced me, and I immediately started in to give a complete history of all defrosting methods that was known by the industry up to that time, and prior to giving a demonstration of the water defrost, and then I went into the demonstration of the unit that I had had built up; and immediately after defrosting the unit that had been first frosted up by the condensor unit on the stand, I further went into a complete story as to the possi-

(Testimony of H. T. Jarvis)

bilities of the water defrost, where they could be used, and how satisfactory they were. And at this stage of trying to explain as to how they could be used in cold storage installations, I was quite rudely interrupted by a Mr. Hawkins, who I understand, or understood at that time, was some assistant to Mr. Goldstein on the committee. I don't recall what his exact status was. Not being a public speaker, I assure you that it was somewhat of a shock to have any one, let alone Mr. Hawkins, right while I was speaking, jump up on his feet and turn his back to me, and make a statement to this group—

Mr. Neave: Just a minute. I want to object to anything that Mr. Hawkins said. This witness has been asked what he did. Now, it is not pertinent as to what Mr. Hawkins said here, and it is purely hearsay.

The Court: Doesn't that go to the state of the prior art? [57]

Mr. Lewis Lyon: Certainly.

Mr. Neave: No, not as to what somebody said.

The Court: But all prior art is what somebody said.

Mr. Neave: What somebody said, if it is in a written disclosure. If it was in a written disclosure, it can be offered, not for proof of itself, but as proof that it was there at the time the man made his invention. You see, what they are trying to do here is to try to prove invention by somebody being surprised. We don't know what the condition of that particular person was, why he was surprised, or what he knew. It is an entirely different matter when somebody is attacking a patent by documentary evidence or testimony, because there it is a matter of what was disclosed and what the inventor had before him. This is just hearsay.

(Testimony of H. T. Jarvis)

The Court: Would it not be admissible on the matter of its use, that is, that it is a new and useful invention?

Mr. Neave: I think it has absolutely no bearing on the question of its being new.

The Court: In other words, that it was an invention, and to show an invention was useful the testimony is put in to show what went on before, and what the attitude of the industry was, or somebody was.

Mr. Neave: What the facts are, your Honor, but not as to what somebody said, who is not here to be cross-examined; not as to what he said. [58]

Mr. Lewis Lyon: I think it is perfectly proper, your Honor, as definitely showing the state of the man's mind, and is an exception to the hearsay rule; in other words, on presentation of this proposition, he immediately objected that it could not be done.

The Court: Are you testifying?

Mr. Lewis Lyon: No, I am not testifying, but that is what the purpose of the showing is, your Honor. It shows definitely the state of the art, and, further, it shows the reception of this invention and the objections of qualified engineers that Mr. Jarvis encountered in trying to introduce it. It is one of the most persuasive points of the invention, of showing the state of the art and the manner in which the invention was received.

Mr. Neave: I have no objection to the state of the art being shown, but I object to how it is shown, and you can't show it by hearsay testimony of this character. It is not proper.

Mr. Lewis Lyon: It is a recognized exception to the hearsay rule, your Honor.

(Testimony of H. T. Jarvis)

Mr. Neave: What counsel is trying to do is to prove something by this statement that the witness is going to make of what somebody else said.

The Court: He is trying to prove what he said at that meeting. [59]

Mr. Neave: Of course, from the point of view of relevance, I don't think it is relevant at all. It has very small relevance. You see, we know nothing about this gentleman, who he is, or what he was, that made him think that it wasn't possible, if it did make him think it wasn't possible. There may be a great many reasons for his not thinking that it was possible, and it would have nothing to do with the invention.

Mr. Lewis Lyon: It is proper to show the man's state of mind by his utterances, and that is what this testimony shows.

The Court: But who is he?

Mr. Lewis Lyon: I will continue to show you that, your Honor. Right here, from Exhibit B, for identification, Mr. John A. Hawkins is identified as one of the Advisors to the Educational Committee of the National Association of Practical Refrigerating Engineers. I am going to follow that up, to show who he is, right here.

Mr. Neave: As I see it, your Honor, there is no point in issue as to what this man's state of mind was. That isn't the issue here.

(Testimony of H. T. Jarvis)

Mr. Lewis Lyon: That is directly the issue.

Mr. Neave: In addition to which, of course,—

The Court: I think probably it is just as admissible, and I don't know whether error piled on error produces good results, but I do know it is practice to admit reports of [60] proceedings of technical and engineering societies when they are discussing subjects in patent cases, and I think this is as admissible as that is.

Mr. Neave: It depends on what you are trying to prove, your Honor. As I stated, if I were to offer such a report, in which water defrosting was disclosed, then that would be admissible.

The Court: Or discussed, or if the state of the art was discussed.

Mr. Neave: Or discussed, because that shows that was in the art, and the inventor is taxed with it, and he must know that. Everything that is in the art the inventor must know.

The Court: I think it is admissible.

Mr. Neave: This is a back-handed way of doing it, your Honor, because this fellow—

The Court: Well, if you can produce it by a writing, you can produce it orally as a record of a proceeding. The objection is overruled.

We will recess until 2:00 o'clock.

(Whereupon, at 12:00 o'clock noon, a recess was taken until 2:00 o'clock p. m. of the same day.) [61]

Los Angeles, California; September 17, 1946; 2:00 o'clock P. M.

The Court: Ex parte?

The Clerk: No ex parte, your Honor. Further trial.

The Court: Before we proceed with the case, the senior judge has asked that we take some note of the fact that this is the 159th anniversary of the signing of the Constitution. I just want to mention that and let the Clerk make a minute appearing in the minutes that attention of counsel and the court was called to the fact that for 159 years the American courts have been sitting uninterruptedly under the Constitution.

Proceed.

Mr. Lewis Lyon: Before proceeding, in order to determine, as far as I am able to, just what our program of presentation of this evidence will be, we have certain installations which, if your Honor feels it would help you in any way to understand this case, we would like to have you see actual installations and operation. In fact, there are two of the installations which I have referred to in my opening statement, that is, the Johnson Pie job and the Dutch Maid Ice Cream, the operations of which are still proceeding as they were originally installed, and I think it would help your Honor to understand this case very materially to see the actual operation of these structures and how they are operated. [62]

We could arrange for that inspection at any time that would suit your Honor's convenience, or counsel for plaintiff.

The Court: Any objection?

Mr. Neave: No objection at all, your Honor, if it helps you at all in the case.



The Court: Well, while this is an American court we still give some adherence to the old Chinese proverb about one picture being worth 10,000 words, so we may be able to save somebody 10,000 words here.

When would be an appropriate time to go? Before the patent is explained or afterwards? I mean, before your experts get up and say, "Turn petcock 1 to valve 6."

Mr. Lewis Lyon: I think, your Honor, it would be just as well to see it before and maybe it will eliminate a lot of necessity of that detailed explanation.

The Court: From both counsel's opening statement, the patent doesn't appear to me to be a very intricate or involved one at all.

Mr. Lewis Lyon: No, it isn't.

The Court: In fact, I flatter myself with feeling that I have some sort of an understanding of it now.

Mr. Lewis Lyon: It is very simple as far as the mechanical operations are concerned. It is very interesting to see it in actual performance, as I think you will see.

The Court: You want me to go and see one of your in- [63] stallations?

Mr. Lewis Lyon: Yes.

The Court: Have you got a brine installation that I can see?

Mr. Lewis Lyon: I have tried to find a brine installation, but unless plaintiff is able to supply one, I can't at the present time.

Mr. Neave: I can find out, your Honor. I don't happen to know.

If these installations are inspected, I was wondering whether counsel intends to have testimony taken at the time of inspection. Is a record going to be made, and so forth? I think perhaps the device is so simple that it



might not be necessary for your Honor to see the installation, but if it is of any help to you, of course I have no objection.

The Court: Well, from both counsel's statements it would seem to me that in a comparison of what you assert is the disclosures of the prior art and more nearly in anticipation of this patent than any other would be the brine installation, and I think that if I could see one I would like to see the other.

Mr. Neave: I will find out and let your Honor know a little later.

The Court: Very well. We will proceed this afternoon then with the testimony and settle that later. [64]

Mr. Lewis Lyon: Your Honor, then the understanding is that you will settle the time later?

The Court: Yes, when he sees if he can find a brine installation.

#### H. T. JARVIS,

called as a witness by and on behalf of the plaintiff, having been previously sworn, resumed the stand and testified further as follows:

Mr. Lewis Lyon: I believe there was a question remaining unanswered at the conclusion.

The Court: Yes. Will you read it, please?

(The record was read by the reporter as follows:

"Q. Will you state what transpired?

"A. After the preliminary order of business, Mr. Barney Goldstein introduced me, and I immediately started in to give a complete history of all defrosting methods that was known by the industry up to that time, and prior to giving a demonstration of the water defrost, and then I went into the demonstration of the unit that I had had

(Testimony of H. T. Jarvis)

built up; and immediately after defrosting the unit that had been first frosted up by the condenser unit on the stand, I further went into a complete story as to the possibilities of the water defrost, where they could be used, and how satisfactory they were. And at this stage of trying to explain as to how they could be used [65] in cold storage installations, I was quite rudely interrupted"—)

The Court: "Rudely interrupted" may be stricken. Strike everything from there down to what Mr. Hawkins said.

(Continuing reading):

"—by a Mr. Hawkins, who I understand, or understood at that time, was some assistant to Mr. Goldstein on the committee. I don't recall what his exact status was. Not being a public speaker, I assure you that it was somewhat of a shock to have any one, let alone Mr. Hawkins, right while I was speaking, jump up on his feet and turn his back to me, and make a statement to this group—")

The Court: That sentence may be stricken. The objection was to what his statement was. That objection is overruled. You may now state what Mr. Hawkins said.

The Witness: Mr. Hawkins stated that he refused to sit there any longer and let a newcomer into the industry tell him that this system would work.

Q. By Mr. Lewis Lyon: As a result of that demonstration that you made at San Francisco, were you able to

(Testimony of H. T. Jarvis)

obtain any orders for this water defrost system in the Bay area?

A. Not for a considerable time; about a year, as I recall the time.

Q. What was the installation that you finally made in [66] the San Francisco Bay area?

A. The Haslett Warehouse job at Oakland.

Q. Will you state the circumstances leading up to and the facts of that installation in the Haslett Warehouse, Mr. Jarvis?

A. This Haslett installation or Haslett job came to my attention quite by accident on a Sunday while visiting the Haslett Warehouse with a friend. I was on my trip to the north to solicit business from our distributors, and when I saw this job being calked in and saw the size of it, it was a room somewhere around 100 feet long by about 30 or 40 feet wide, I became tremendously interested and stayed over in San Francisco until Monday morning, at which time I contacted Mr. Hinman, the general manager of Haslett, and asked him from whom he was purchasing his refrigeration for the cold storage warehouse I had seen, and he stated to me that he was—

Mr. Neave: Your Honor, here we go again.

The Court: I think so.

Q. By Mr. Lewis Lyon: Just eliminate what was stated to you at that time, Mr. Jarvis, and continue with your explanation of this installation.

A. Mr. Hinman showed sufficient interest to call in his chief engineer, Mr. James Payne, and made the statement to me if I could sell Jimmie Payne—

Mr. Neave: Your Honor, this is more hearsay. [67]

(Testimony of H. T. Jarvis)

The Court: I think so. Omit the statements that they made to you.

Q. By Mr. Lewis Lyon: You stated that he called in Mr. Payne, and you then took the matter up with Mr. Payne; is that correct?

A. Yes, that is correct. And Mr. Payne—

Q. As a result of your conversation with Mr. Payne, you were able to get the order for that installation, were you?

A. On a six months trial basis, yes, sir.

Q. Was it or was it not necessary for you to give any guarantee to get that job installed?

A. It was necessary to give a guarantee that if the units did not work to their entire satisfaction and in accordance with the statements regarding how it would function, that we would take it out with no cost to them and replace the original installation that they intended to put in at no cost to them.

Q. Was that job installed on that understanding?

A. Yes, sir, it was.

Q. Is that job still operating?

A. Yes, sir, it is.

The Court: What kind of a system did you agree to put back in, if you took your out?

The Witness: The system that Haslett had already engineered and had purchased the pipe to install. [68]

The Court: What was it?

The Witness: A pipe installation, your Honor.

The Court: A brine system?

The Witness: No, sir, an ammonia system with a direct expansion, where the entire ceiling of this room for about four feet down was filled with coils.

(Testimony of H. T. Jarvis)

The Court: What defrosting system did he have?

The Witness: Your Honor, on that type of defrosting it was necessary to use the hot gas method, in which case they would be obliged to remove from the room hundreds of thousands of pounds of frozen products.

The Court: All right. Did you put the system in?

The Witness: Yes, your Honor, we did.

The Court: Do you know whether or not it has worked? Have you been back there?

The Witness: I have been back a number of times.

The Court: Did you have to take it out and put the other in?

The Witness: No, sir, we did not.

The Court: Does that system still remain there?

The Witness: It still remains.

The Court: When did you put it in? When was it completed?

The Witness: The exact date, your Honor, I don't recall.

The Court: Well, about when? [69]

The Witness: About early 1939.

The Court: Early in 1939. Is it there and has it been operating during this period?

The Witness: Continuously.

The Court: Continuously?

The Witness: Yes, sir.

The Court: The same system?

The Witness: The same system.

The Court: No changes?

The Witness: No changes after the initial adjustments were made.

The Court: Very well.

(Testimony of H. T. Jarvis)

Q. By Mr. Lewis Lyon: That system was written up, I believe, after installation, sometime later, in the "Air Conditioning and Refrigeration News", was it, Mr. Jarvis?

A. That is correct.

The Court: That will be C, for identification.

(The document referred to was marked as Defendant's Exhibit C, for identification.)

Mr. Neave: Are you offering that?

Mr. Lewis Lyon: I will have to have it identified first.

Q. By Mr. Lewis Lyon: I hand you Exhibit C, which is entitled "Reprint from Air Conditioning Refrigeration News" of September 17, 1941, and ask you if you can identify this, Mr. Jarvis. [70]

A. Yes, I can.

Q. You identify this as what?

A. As the story that was written up about the Haslett installation.

Q. And was that published in the periodical which appears at the top of Exhibit C?

A. Yes, it was.

Q. Under what date?

A. Under the date of September 17, 1941.

Q. That is a periodical of the refrigeration industry, is it?

A. Yes, sir.

Q. Of general circulation?

A. Yes, it has a very wide circulation.

Mr. Lewis Lyon: I will offer this article in evidence as Defendant's Exhibit C.

Mr. Neave: I object to it, your Honor. I don't see the relevance of this article, and I submit it is completely



(Testimony of H. T. Jarvis)

hearsay. After all, this is with respect to an installation long after the invention of the patent.

The Court: It would be admissible, if admissible at all, on the element of its being a useful invention and having commercial success.

Mr. Neave: Having commercial success, yes, but there may be all sorts of statements in that article of fact, which, of [71] course, have no prohibitive value here. Just because some statement is made in this article is not a proper way of proving the facts with respect to that statement, and the question of commercial success ought to be proved by somebody who can be cross-examined upon it.

The Court: I think so. Of course, you can cross-examine this witness, so far as he goes, as to the weight of his testimony. [72]

Mr. Lewis Lyon: We will produce also Mr. James Payne, the engineer that operated that plant here.

The Court: The objection is sustained. This in the meantime will be marked for identification. If you produce the author of the article, then he can be cross examined.

Mr. Lewis Lyon: I will re-offer it through the other witness.

If I might explain, our purpose is to show the public recognition that was given this job on the element of commercial success, and also the proposition of the commercial recognition that was given this system after the Refrigeration Engineering overcame the initial resistance to its introduction. I am not presenting that as an argument at the present time, but merely as an explanation, your Honor.



(Testimony of H. T. Jarvis)

The Clerk: Defendant's C for identification.

(The document referred to was marked Defendant's Exhibit C for identification.)

By Mr. Lewis Lyon:

Q. Mr. Jarvis, in referring to this association meeting at which you presented your story with respect to water defrosting, you refer to a Mr. Hawkins. I hand you Exhibit B for identification and will ask you if the Mr. Hawkins you refer to is identified on this exhibit.

A. Mr. John A. Hawkins is on this under the Advisors Educational Committee. He is the same Hawkins that I referred to. [73]

Q. What was your first installation made in the city of Los Angeles or in this immediate vicinity?

A. It was made to an Oriental fellow on San Pedro Street. I think he pronounced his name Kawike.

Q. K-a-w-i-k-e? A. That is correct.

Q. Will you explain the circumstances of that installation, Mr. Jarvis.

A. Well, I was able through a very personal friend of mine, Mr. Elmer Johnson—

The Court: What is the materiality of the circumstances, counsel?

Mr. Lewis Lyon: The materiality, your Honor, is that I want to show the difficulty that they had in introducing this system, what happened when this installation was made and what steps were necessary in order to get this system introduced at all because of the trade resistance and the resistance of the so-called engineers in the art that were supposed to know.

The Court: All right. Go ahead.

(Testimony of H. T. Jarvis)

The Witness: I was able to get this job installed through the personal help of a very good friend of mine, Mr. Elmer Johnson, who was chief engineer for O'Keefe & Merritt Company, who made the installation, who also manufactured the condensing unit.

It was installed in a reach-in hardening cabinet to hard-  
[74] en the ice cream from one of O'Keefe & Merritt's freezers that they manufacture

We encountered considerable trouble on this job because we failed to supply sufficient coverage with our spray except on the fin section of the coil and did not supply the water spray over the return bends assuming, I guess, because they were out of the airstream they would not frost, and consequently we had to take that coil out and build another coil with sprays over the return bends before the job was entirely satisfactory.

By Mr. Lewis Lyon:

Q. After this change was made, was the job entirely satisfactory?      A. Yes, it was.

Q. And it stayed put?      A. Yes, sir.

The Court: Is it still there?

The Witness: Your Honor, I don't know whether it is or not. I haven't personally investigated it.

By Mr. Lewis Lyon:

Q. In introducing this system in the city of Los Angeles, did you at any time appear before any meeting of any engineers here in Los Angeles of any company or otherwise, Mr. Jarvis?

A. I gave one public demonstration at the R. W. Weid- [75] line Company on South Los Angeles Street.

(Testimony of H. T. Jarvis)

Q. Who was present at that demonstration?

A. There was about 30 refrigeration salesmen and engineers, sales engineers, present, and in addition to the engineers working for the R. W. Weidline Company there was a Mr. Vering of the Vering Manufacturing, Mr. Carl Hyde, also of the Vering Manufacturing, and a Mr. Wally Hulse from Koch Refrigerator, whose product Mr. Weidline also handled.

Q. What was the reception of that demonstration at that time?

A. The reception at that time was typical of all other receptions, that everyone would look at it and make very few comments, because most people don't just make comments without some reason for it, or ask for their comments, but those that did comment said that they would have to see a job installed before they would believe it would work.

Mr. Neave: Your Honor, I don't like to interrupt, but it seems to me that the continual reference to what people said is not proper under the circumstances.

The Court: I suppose the only admissibility of this at all would be that it would tend to show the novelty, that this was a new thing.

Mr. Neave: I don't think that is the proper way of proving that. It has no probative value. We haven't any indication of the competence of these people that he is talking to. [76]

In addition to that, this is long after the invention of the patent.

The Court: Of course it would apparently be still new.

(Testimony of H. T. Jarvis)

Mr. Lewis Lyon: It shows the reception that the art had of it and that it was very contrary to the teachings of the art and that the people said that they could not accept it unless they saw it work, which goes very heavily to the point—

The Court: I think that is true, but I don't know. I overruled the other one on that basis. I think he is right. I think if you want to produce that kind of testimony you will have to produce the people who said it.

The objection will be sustained, and that portion of the answer stricken as to what they said.

Did you sell any orders there?

The Witness: Yes, sir.

The Court: How many?

The Witness: Do you mean, your Honor, that I sold an order that night from the demonstration?

The Court: Did that result in orders?

The Witness: It resulted in some future orders from the R. W. Weidline Company. That is what I meant to say.

By Mr. Lewis Lyon:

Q. Did you do anything in addition to this demonstration in furthering the obtaining of the orders from the R. W. [77] Weidline Company, Mr. Jarvis?

A. The only thing I did other than the demonstration was to talk to various customers at the R. W. Weidline Company who were brought to our plant to see this device, this water defrost coil.

The Court: Did you have one in operation at your plant?

The Witness: Yes, sir; we did.

(Testimony of H. T. Jarvis)

By Mr. Lewis Lyon:

Q. And customers were brought there to look at it, were they?      A. They were.

Q. Before any of these sales were made?

A. They were.

Q. You stated, Mr. Jarvis, that there was one Mr. Hulse present at this meeting, is that correct?

A. That is right.

Q. Are you acquainted with Mr. Hulse?

A. Yes, I am.

Q. Were you acquainted with him before the meeting?

A. I had met him on one occasion prior to that demonstration.

Mr. Lewis Lyon: Your Honor, I don't want to appear to be going against your Honor's ruling in this, but maybe it is not an opportune time, it is more in the nature of rebuttal, but I do want to set before this court, either now or in [78] rebuttal, the position that was taken by Mr. Wally Hulse at the time of that demonstration as he is one of the principal witnesses relied upon by the plaintiff in their attempt to prove prior use.

The Court: Maybe you can get it out of him by cross examination, so why take up the time now?

Mr. Lewis Lyon: Mr. Hulse is not here, and won't be here.

The Court: I thought you said he is one of their principal witnesses.

Mr. Lewis Lyon: They took his deposition in Portland.

The Court: In Portland?

Mr. Lewis Lyon: Yes, in this matter.

The Court: I think it is anticipatory, counsel.

(Testimony of H. T. Jarvis)

Mr. Lewis Lyon: I will wait until the matter is put in and then renew the offer, if that is your Honor's desire.

Q. Did you ever have at this time dealings with Creamery Package Company or anyone connected with that concern? A. I did.

Mr. Neave: May we ask what "this time" is?

By Mr. Lewis Lyon:

Q. When was this?

A. I don't believe I understand your question.

Q. What was the time?

The Court: When did you have your meeting at Weidline?

The Witness: Your Honor, I don't remember the exact [79] date.

The Court: Well, approximately, the year.

The Witness: It seems like '39, but I am not sure. I can refer to the records. I have all those records. I have them here. I turned them over to Mr. Lyon.

By Mr. Lewis Lyon:

Q. You refer, do you, to the sales records that you gave me, Mr. Jarvis?

A. Yes, sir. I gave you a tabulated list of each individual coil that was sold of this new water defrost coil and to whom it was sold and the date.

The Court: Do you have it there?

Mr. Lewis Lyon: Yes, I have it here.

The Court: Why don't you lead him a minute. I think it would be harmless leading.

(Testimony of H. T. Jarvis)

By Mr. Lewis Lyon:

Q. I believe that you were referring to the time preceding the installation of this Johnston Pie Company job to establish that date, are you not, Mr. Jarvis?

A. Preceding the Johnston Pie job?

Q. Yes. A. I don't believe so.

The Court: When was the Weidline meeting?

Mr. Lewis Lyon: The Weidline meeting is not on here. He will have to pick it out as to how he establishes that [80] date, your Honor. I will hand him these records.

The Court: All right.

The Witness: I believe, your Honor, that the meeting at Weidline was within the first three months of 1939.

The Court: 1939?

The Witness: Yes, sir.

The Court: All right.

By Mr. Lewis Lyon:

Q. When did you first take this matter up with any representative of Creamery Package Company, Mr. Jarvis?

A. At about the same time of the meeting with Weidline Company, I called on both the Creamery Package and all other commercial refrigeration accounts in the city of Los Angeles.

Q. And as a result of your call upon Creamery Package, did you make any arrangements with that concern?

A. I made no specific arrangements at the time I called on them.

Q. At a later date, did you?

A. I made specific arrangements with them at the time they brought a Mr. Lawrence from the Dutch Maid



(Testimony of H. T. Jarvis)

Ice Cream Company, one of their customers, and agreed to guarantee the installation if they would put it in and take the coils out if they did not function.

Q. That is with reference to the Dutch Maid job, and when was that installed or that order taken, if you will re- [81] fer to your records?

A. In December of 1939.

Q. Now will you explain the situation with respect to the installation of the Johnston Pie Company job in Los Angeles.

A. May I have that question?

(The question referred to was read by the reporter, as follows:

("Q. Now will you explain the situation with respect to the installation of the Johnston Pie Company job in Los Angeles.")

The Witness: This job was handled mainly by one of my sales engineers, Mr. Kirkwood, who was the Frigidaire Engineer, just prior to our hiring him about three months before the Johnston Pie job, and through one of the Frigidaire dealers that he knew very well he was able to get them to recommend to Mr. Johnston of the Johnston Pie Company the water defrost installation, and subsequently I gave them, or Mr. Kirkwood rather gave them, a letter with my approval guaranteeing the installation if they would put it in.

By Mr. Lewis Lyon:

Q. That is, you gave them a written guarantee before they would permit that installation to be made?

A. I authorized a guarantee, or Mr. Kirkwood's signature, to be given; yes, sir.

(Testimony of H. T. Jarvis)

Q. Do you know, Mr. Jarvis, of your own knowledge [82] whether that Johnson Pie Company is still installed?

A. Yes, I do.

Q. Is it still working?

A. Still working to their satisfaction.

Q. Do you know, Mr. Jarvis of your own knowledge as to whether the Dutch Maid Ice Cream job is still installed?

A. I do.

Q. Is it still operating? A. Yes, it is.

Q. Giving satisfaction? A. It is.

Q. You have never been called upon to replace or change either of these jobs in any way?

A. No, sir, we have not.

Q. I hand you a copy of a letter of June 16, 1939, addressed to Johnston Pie Company, and I will ask if you can identify this letter.

The Court: D.

The Clerk: D for identification.

(The document referred to was marked Defendant's Exhibit D for identification.)

The Witness: This is a copy of the letter that Mr. Kirkwood was authorized to send to Mr. Johnston.

By Mr. Lewis Lyon:

Q. The original of that letter was signed in your [83] presence? A. It was.

Q. Is this a true ribbon copy of that letter?

A. Yes.

Q. Was the letter, to your knowledge, sent to or posted to the Johnston Pie Company, the addressee?

A. Yes, sir.

(Testimony of H. T. Jarvis)

Mr. Lewis Lyon: I will offer this copy in evidence as Defendant's Exhibit D.

Mr. Neave: No objection.

The Court: Admitted.

(The document referred to was received in evidence and marked Defendant's Exhibit D.)

[Note: Defendant's Exhibit D will be found in the Book of Exhibits at page 1484.]

Mr. Neave: I don't know what the custom is here, your Honor, but we have no copies of these exhibits and I hope that counsel will furnish us promptly with copies of them.

Mr. Lewis Lyon: Yes, I will see that you get copies.

The Court: I somehow or other had the impression that each side here had exchanged prior to the trial copies of all writings they had expected to rely upon.

Mr. Neave: No, sir.

Mr. Lewis Lyon: We haven't either.

The Court: How did we miss on that?

The Clerk: We didn't have a pretrial.

Mr. Neave: For purposes of cross examination, it would [84] be helpful to have these exhibits. I don't know whether it is possible for us to take these out of the Clerk's custody over night, or what.

Mr. Charles Lyon: If it is agreeable, we will withdraw the exhibits and photostat them at the end of each day and supply you with photostats the following morning.

The Court: Is that agreeable?

(Testimony of H. T. Jarvis)

Mr. Neave: That is a little difficult, your Honor, because then they are not available to us during the evening. I hope that Mr. Lyon hereafter can make available when he is offering something a copy for our use.

The Court: Maybe you can get photostats beforehand.

Mr. Lewis Lyon: As far as possible I will, your Honor. Some of this correspondence has only recently been presented to me.

The Court: Very well.

Mr. Neave: I might add, your Honor, I understand that Mr. Lyon wants to offer a number of publications, and so forth, and yesterday I asked him for copies of those, which I haven't received yet. I hope that I can get them at the time they are offered.

Mr. Lewis Lyon: I will get them to you before this evening. I have one additional one that I will try not to refer to tonight, but I will have it for you in the morning if possible. [85]

Mr. Neave: Thank you.

The Court: I am sorry I didn't have a pretrial conference in this matter because ordinarily in patent matters I like to see that all prior art and previous publications are exchanged between the parties sufficient in advance or trial.

Do you have additional copies?

Mr. Neave: Yes, indeed, your Honor. Ours, of course, have already been noticed in the complaint and they can get those, and those that were not I gave to Mr. Lyon yesterday.

The Court: Very well. You will have those ready tonight?

(Testimony of H. T. Jarvis)

Mr. Lewis Lyon: I will try to get them, your Honor.

Mr. Charles Lyon: As fast as we can get the photostat operators to work. We have some of them already.

The Court: Very well.

By Mr. Lewis Lyon:

Q. Mr. Jarvis, have Refrigeration Engineering licensed any other concern under the McAdam patent in suit?

A. A number of them. [86]

Q. Can you name the companies that are licensed?

A. I believe I can.

The Court: You have the agreements there. Hand them to him so he can refresh his recollection, and I believe it will save some time.

Counsel, have you seen them?

Mr. Neave: No, sir.

The Court: Are they all the same?

Mr. Lewis Lyon: Not identical, your Honor.

The Court: All right.

Mr. Lewis Lyon: They are principally the same. As far as I know, your Honor, they are word for word, with one possible exception, so it may be just as well to use one as a sample, and I will leave the others here.

The Court: We will have them all marked for identification, and then use one to be introduced in evidence, if it is admissible. We can determine that later. There is no use in building a record up here.

Mr. Lewis Lyon: That is right.

The Clerk: These will be Defendant's Exhibits E, F, G, H, I, J, K, and L.

The Court: E to L?

The Clerk: E to L.

(Testimony of H. T. Jarvis)

(The documents referred to were marked as Defendant's Exhibits E, F, G, H, I, J, K, and L, for identification.) [87]

Mr. Neave: And may they be identified as to which is which, Mr. Lyon?

Mr. Lewis Lyon: I will give them to you. E is Drayer & Hanson. I will let you keep the Drayer & Hanson, or, I will use that one and you can take the others. First I will have them identified.

Q. By Mr. Lewis Lyon: Can you determine from these copies of the license agreements who the licensees are, Mr. Jarvis? A. Yes, sir.

Q. Will you do so?

A. Drayer & Hanson Corporation, Los Angeles; Refrigeration Appliances, Inc., Chicago, Illinois.

Mr. Neave: Which exhibit is that?

Mr. Lewis Lyon: The first one was E. The second one is L, that he referred to.

The Witness: Pardon me. K is—

The Court: Can't you arrange them alphabetically? We will get them out soon enough.

Q. By Mr. Lewis Lyon: All right. Start with them upside down. You said E was Drayer & Hanson?

A. E is Drayer & Hanson, Incorporated, Los Angeles. F is the Bush Manufacturing Company, Hartford, Connecticut. G is General Machinery Company, Spokane, Washington. H is McQuay, Inc., Minneapolis, Minnesota. I is Manufacturers [88] Fin Coil, Chicago, Illinois. J is Globe Ice Machine Company, Los Angeles. K is Kramer-Trenton Company, Trenton, New Jersey. And L is Refrigeration Appliances, Inc., Chicago, Illinois.



(Testimony of H. T. Jarvis)

Q. By Mr. Lewis Lyon: I hand you, Mr. Jarvis, Exhibit H, for identification, and will ask you if this is a true photostatic copy of the existing agreement with the McQuay Manufacturing Company, and is it complete in every respect?

A. Yes, sir, it is a true photostatic copy of the original license agreement.

Q. Is that agreement now in effect?

A. Yes, sir, it is.

Q. Are the royalties still being paid under that agreement?

A. Yes, sir.

Q. In accordance with the terms of the agreement?

A. Yes, sir.

Mr. Lewis Lyon: According to the court's suggestion, I will offer the document, Exhibit H for identification, into evidence as Defendant's Exhibit H, it being represented that all of the other agreements are the same in terms. If I find any difference, I will bring it to the court's attention.

The Court: Admitted.

(The document referred to, heretofore marked Defendant's Exhibit H for identification, was received in evidence.) [89]

[Note: Defendant's Exhibit H will be found in the Book of Exhibits at page 1485.]

Q. By Mr. Lewis Lyon: Have you had a compilation made of the royalties that have been paid you or to Refrigeration Engineering under the terms of these agreements?

A. I have.



(Testimony of H. T. Jarvis)

Q. Does that compilation give a true account of those records?      A. It does.

Q. I hand you some papers, Mr. Jarvis, and ask you if that is the compilation of your royalty accounts with these different parties?

A. Yes, sir, they are.

Q. From those reports can you state the total royalties that have been paid to you by each of the licensees, up to and including the last date shown by that compilation?

A. The Kramer-Trenton Company, \$3,591.90, up to the end of 1945. Refrigeration Appliances, \$12,918.85, to the end of 1945. Manufacturers Fin Coil, \$170.42, to the end of 1945. Drayer & Hanson, \$16,710.40, to the end of 1945. McQuay, Inc., \$11,550.78, to the end of 1945. Bush Manufacturing, \$7,363.20 to the end of 1945. General Machinery Company, \$40.20, to the end of 1945. Globe Ice Machine Company, none; it is a new license agreement.

Mr. Lewis Lyon: That is all. You may cross-examine.

The Court: Cross-examine. [90]

### Cross Examination

By Mr. Neave:

Q. Mr. Jarvis, as I understand it, you are familiar with refrigeration problems?      A. I feel that I am.

Q. What education have you had in technical engineering lines?

A. Mainly the School of Hard Knocks.

Q. Are you an engineer, graduate engineer?

A. I am not.

(Testimony of H. T. Jarvis)

Q. You started work in refrigeration in 1927?

A. That is correct.

Q. What did you do at that time?

A. Sold household refrigeration for the first perhaps year or year and a half.

Q. Whom did you work for then? A. Myself.

Q. Were you an agent for somebody else?

A. I operated under the name, fictitious firm name, of Jarvis Brothers.

Q. You sold somebody else's refrigeration equipment; is that right? A. That's right.

Q. Whose equipment?

A. I sold Kelvinator and O'Keefe & Merritt primarily. [91]

Q. Was that household refrigeration?

A. No, sir. The household was O'Keefe & Merritt.

Q. I can't quite hear you, Mr. Jarvis.

A. The household was O'Keefe & Merritt.

Q. And that was for a year that you did that work?

A. From a year to eighteen months.

Q. What did you do after that?

A. I continued to sell household refrigeration, and in addition commercial refrigeration.

Q. That was for yourself? A. That's right.

Q. Selling other people's equipment?

A. That's right.

Q. Did you do that until 1932? A. I did.

Q. And then you formed your company?

A. Formed the present corporation, Refrigerating Engineering, yes, sir.

Q. And you have been with them ever since?

A. That's right.

(Testimony of H. T. Jarvis)

Q. That is a corporation? A. That's right.

Q. Now, I want to get a little clear in my own mind just what it is that your company manufactures, and what it is that it sells. I understood from your direct examination that they [92] manufactured the evaporator unit, the coils. Now, does that include the fan? Do you manufacture the fan?

A. No, sir, we do not manufacture the fan.

Q. And you do not manufacture the motor that goes with that? A. No, sir, we do not.

Q. That is a part, however, of the unit that you sell?

A. It is.

Q. You buy those and resell them. What about the container which in the patent is shown above the coils? Do you sell such a container?

A. I don't believe I understood your question.

Q. There is the water defrost spray container placed above the coils. Do you sell such a container with your unit? A. We do.

Q. And you make that? A. We do.

Q. What about the drip pan below the unit? Do you make and sell that? A. Yes, we do.

Q. Now, what about the connections to the container, water container, above the coils, the rubber hose, I believe it is? Do you sell the rubber hose?

A. We do not.

Q. When you sell these units, you sell them as a unit, [93] a complete unit, consisting of the water container, the evaporators, the fans, the motor and drip pan only; is that right? A. That's right.

(Testimony of H. T. Jarvis)

Q. Now, do you sell any valves, three-way valves, with the unit?

A. We supply a three-way valve with each unit, yes, sir.

Q. That is with each unit that you sell?

A. Each water defrost unit.

Q. Now, do you sell the water defrost unit separately from the entire unit, the coils?

A. I am sorry. Your question isn't clear.

Q. Well, my difficulty is that I am not quite clear as to what it is you sell. Is this a package you sell, a complete package, consisting of a tank on top the coils, the fan, the motor, and the drip pan, all enclosed in one package?

A. Yes, sir, that's right.

Q. I see. So that with each such package you sell the valve,—a valve; is that right?

A. That's right.

Q. But no conduits, no water conduit between the valve and the other parts of the unit?

A. Yes, I would say that we sell some conduit with it, because there is a piece of conduit connected on to the spray pan and also the defrost pan. [94]

Q. How long a piece is that?

A. Maybe 8, 10 or 12 inches, depending on the model.

Q. That is integral with the pan?

A. It is.

Q. I see. But there is, as I understand it, conduit between the unit and the valve, and you don't sell that?

A. No, sir.

Q. That is right. Now, these valves that you sell, you don't make those?

A. We do not.

Q. What are they? What kind of valves are they?

A. They are a three-way valve.

(Testimony of H. T. Jarvis)

Q. Just what does that mean?

A. It means that you can use either one of three openings on them.

Q. Is that a manually-operated valve?

A. The one that is supplied with each unit, yes.

Q. It is not electrically-operated? A. No, sir.

Q. And that you buy in the open market?

A. Yes, sir.

Q. Was that available as a commodity when you went in business in 1927?

A. I don't know whether it was or wasn't.

Q. Was it in 1932, when you incorporated your company? [95]

A. I wouldn't know whether it was or not. I had no occasion to find out.

Q. You never saw a three-way valve prior to the time that you started selling them in this unit?

A. To my knowledge I had not, no, sir.

Q. After you sell these units, do you install them?

A. We do not, no, sir.

Q. Do you sell them to retailers who then do the installation?

A. We sell them to contractors and other manufacturers only.

Q. And they make the installation?

A. Yes, sir.

Q. They make the connections?

A. That's right.

Q. Now, you mentioned the National Association of Practical Refrigerating Engineers. Do you know what

(Testimony of H. T. Jarvis)

are the qualifications necessary to become a member of that association?

A. I don't believe I know exactly the qualifications except that they must be an engineer in the industry. I believe that is the basic qualification, at least.

Q. Are you a member? A. I am not.

Q. Do you know whether or not you have to be a graduate [96] engineer to be a member of that Association? A. I am sorry, I don't know.

Q. Now, you mentioned a Mr. John A. Hawkins who interrupted you while you were talking. What is his full name, do you know?

A. I believe it is John A. Hawkins.

Q. Where is he from? A. San Francisco.

Q. Do you know him personally?

A. I do now, yes, sir.

Q. You didn't know him before then?

A. I did not, no, sir.

The Court: Have you sold him your refrigeration?

The Witness: No, sir, I haven't.

Q. By Mr. Neave: What is his business, do you know?

A. He is an engineer. I believe at the present moment he is with the government, but he has been, since I met him at this meeting, an engineer for one of the large ice companies in San Francisco.

Q. When you used the term "engineer," how were you using it? Do you mean a graduate engineer?

A. I mean that he is the man that has complete charge of the refrigeration machinery, and is called an engineer, and all problems pertaining to the equipment are referred to him as an engineer. [97]

(Testimony of H. T. Jarvis)

Q. You don't know whether or not he is a graduate engineer?

A. I don't know whether he ever went to school a day in his life or not.

Q. That's right. You didn't know anything about him prior to the time he interrupted you?

A. No, sir.

Q. Now, you mentioned a job that you put in, I think it was at the Haslett Warehouse, where you said that they had hot air defrosting. Was that the Haslett Warehouse job?

A. I don't believe it was.

Q. What job was that?

A. I don't know, sir, what job you are referring to.

Q. You recall in your direct testimony that the court asked you—

Mr. Lewis Lyon: It was hot gas.

Q. By Mr. Neave: Hot gas. The court asked you whether your method of defrosting was satisfactory, and you said, "Yes." Then he asked you what kind of defrosting you were going to put back in there if it wasn't satisfactory.

A. That was hot gas and not hot air.

Q. What job was that?

A. The Haslett Warehouse.

Q. The Haslett Warehouse. Now, that job, as then installed, before you put in your unit, had pipes, refrigeration [98] pipes, around the room; is that correct?

A. No, sir, the job had not been installed. They had purchased the pipe, but had not installed it at the time the sale was made.

Q. The installation that you would have had to have made if your device had failed would have been a pipe job; is that correct?

A. That's right.



(Testimony of H. T. Jarvis)

Q. That means that bare pipe would run around the room?

A. No, sir, that wouldn't run around the room. That would be mounted on the ceiling.

Q. On a portion of the ceiling?

A. On the entire ceiling.

Q. On the entire ceiling?

A. In that type of installation.

Q. Am I correct that there are, in general, two kinds of refrigerating units, and one is the, let us call it, package job, such as yours, where it is enclosed except for the front or side, or wherever it may be that the air is blown through, and the other kind where you have a lot of exposed pipes in a room and there is no fan, or possibly there may be a fan; is that right?

A. Well, that is two types of coils, yes, sir.

Q. There was those two types of coils?

A. Yes, sir. [99]

Q. You mentioned the first installation that you made at the Kawike store. What was the date of that installation?

A. I will have to refer to our installation here. 5-5-39.

Q. You mentioned the Kramer-Trenton Company as being one of your licensees. Do you know whether or not they sell refrigeration units with defrosting equipment other than water defrosting?

A. Yes, sir, they do.

Q. What kind?

A. I believe they sell two different kinds. One of them is an electric defrosting unit, and another is what they call a thermal bank unit they have recently developed.

(Testimony of H. T. Jarvis)

Q. What does that mean?

A. Don't ask me what it means, because I don't think I can tell you exactly what it means, except they store up hot liquid and use it for defrosting, much the same as they do hot brine.

Q. I see. What about the Refrigeration Appliance Company? That is also a licensee of yours?

A. That's right.

Q. What equipment do they sell other than the water defrosting equipment?

A. I don't know whether they sell any other type of defrosting equipment or not. [100]

Q. What about the Manufacturers Fin Coil Company? Do they sell other types of defrosting equipment?

A. Not to my knowledge.

Q. I noticed that their royalties are \$170.42. Do they sell equipment for low temperature use?

A. Yes, they do. [101]

By Mr. Neave:

Q. What about Drayer & Hanson, what kind of defrosting do they use? A. Water defrost.

Q. Any other kind? A. Not to my knowledge.

Q. What about McQuay, Inc.?

A. Same applies with McQuay.

Q. You don't think they sell anything but water defrost? A. If they do it isn't known to me.

Q. And the Bush Manufacturing Company?

A. Nothing but water defrosting.

Q. And the General Machinery Company?

A. I believe the same applies there, water defrosting.

Q. Only water defrosting? A. Yes.

(Testimony of H. T. Jarvis)

Q. Doesn't the General Machinery Company sell refrigeration units for low temperature, below freezing jobs? A. Yes, they do.

Q. How long was it after you first started your company in 1932 that you first started making these water defrost units? A. About five years.

Q. Have you seen a brine defrosting unit in operation? [102] A. Yes, I have.

Q. Have you seen the coils when they were being defrosted? A. Yes, sir.

Q. Have you seen the coils of a hot gas unit while it is being defrosted? A. I have.

Q. What about a hot air unit?

A. I don't believe I could say that I have seen one while they are being defrosted because they are in a duct system or they couldn't be defrosted with hot air.

Q. When you say they are in a duct system, does that mean that this package unit is closed off from the rest of the room when the defrosting is taking place?

A. That is what I meant to imply; yes, sir.

Q. And the hot air circulates just within the unit and goes out again and doesn't go into the refrigerated space?

A. That is right.

Q. Now when brine is used to defrost, what effect, if any, does the brine have upon the frost or ice on the pipes? A. Well, it melts it.

Q. Does it have any solvent effect in addition or different from that which water has?

A. You said solvent? [103]

Q. Yes.

A. I don't know whether you would call it solvent or not, but it does deposit small particles of salt on the pipe.

(Testimony of H. T. Jarvis)

Q. Does the salt help in melting the ice or frost?

A. I don't believe so.

Q. When water defrosting is used, isn't it a fact that the frost or ice on the coils at the top of the unit melt off first?

A. Quite obviously.

Q. And then progressively downward?

A. That is right.

Q. And of course you don't turn the water off until all of the frost or ice has been taken off of the coils? That is the purpose of the defrosting?

A. That is right.

Q. Now what is the temperature of this water that is used to defrost?

A. It depends on the locality of the installation.

Q. Do you use tap water?

A. That is right.

Q. What is the temperature of the tap water around Los Angeles, for instance?

A. Somewheres between 70 and 80 degrees.

Q. Now when you defrost with hot gas, as you have seen it done, isn't it so that the frosting or ice on the coils is [104] melted much the same and at the same rate at the top as it is at the bottom or in the middle?

A. That is not so.

Q. How does it go? Tell us about it.

A. The ones I have seen, the ice drops off from the lower coils first usually, because that is where the refrigerant is fed to the coils and it doesn't just melt off, it usually drops off.

Q. Drops off from the bottom first and works its way up?

A. That is right.

(Testimony of H. T. Jarvis)

Q. And you haven't observed the hot air because it has been enclosed while it was being defrosted, is that correct?      A. That is correct.

Q. Now in defrosting with water, your water you say is between 70 and 80 in Los Angeles, what is the temperature of the top coils at the time that you finish your defrosting?

A. That depends on a great many conditions.

Q. What conditions?

A. The temperature of the refrigerant when you start to defrost, for one thing; temperature of the room for another.

Q. Now when you defrost, do you shut off the fan in your unit?      A. We do.

Q. Do you shut off the refrigerant?

A. We do—I beg your pardon—did you say refrigerant or refrigeration?

Q. Refrigerant.

A. I am sorry. I understood you to say refrigeration. We shut off the refrigeration machine and not the refrigerant.

Q. You shut down the compressor?

A. That is right.

Q. But you don't take the refrigerant out of the coils?

A. No, sir, we do not, nor do we shut off the supply of refrigerant to the coils at any time.

The Court: Doesn't that shut off when you shut off the compression?

The Witness: No, sir, not necessarily. The refrigerant continues. It depends on the pressure. It continues to go through the system to some extent.

(Testimony of H. T. Jarvis)

By Mr. Neave:

Q. Do you sell any evaporator units without a water defrost header?      A. Yes, sir, we do.

Q. Have you ever brought suit under the McAdam patent against any of your customers, any of the people that have bought a water defrost system from you?

A. I believe that could be better answered by our attorneys, couldn't it?

Q. Well, you should know as vice president of the company, I should think. [106]

The Court: You mean brought suit on the patent?

Mr. Neave: On this patent against anybody who has purchased a water defrost system from them.

The Court: You mean from them?

Mr. Neave: From them, from the company.

The Witness: Yes, we did.

By Mr. Neave:

Q. Who was that?

A. The Acme Scale and Fixture and their supplier of coils, the Peerless of America; and later we filed another suit against Arden Farms and Gay Engineering and Carrier Corporation.

Q. That was because of their having purchased from you these units that you sold?      A. No, sir.

Q. It was for having purchased the units from somebody else?      A. That is right.

Q. To the best of your knowledge, you have never sued anybody because they purchased the unit that came from your company?      A. Of course not.

Q. Does the McAdam patent number appear on the units that you sell?      A. Yes. [107]

(Testimony of H. T. Jarvis)

Q. I think you stated that you don't sell any compressors or condensers, did you so state?

A. I stated that we don't sell condensing units, but we do sell a line of evaporative condensers.

Q. What about compressors?

A. We don't have anything to do with compressors.

Q. You don't sell the refrigerant used in these units, do you?

A. No, sir, we do not.

Q. Any refrigerant can be used in these units, is that correct?

A. If the unit is made for the particular type of refrigerant; yes, sir.

Q. Is that specified when you sell equipment? Is that one of the specifications?

A. Yes, sir.

Q. What is the purpose of the fins on these coils?

A. To act as inexpensive heat transfer medium.

Q. Does rubber have a relatively low specific heat?

A. I believe it does.

Q. Has it got a lower specific heat factor than metal, copper for instance?

A. I would say that it does; yes, sir.

Q. Does your company not claim that thin walled rubber hose must be used inside the refrigerators operating below [108] freezing?

A. Yes, we teach them to use rubber hose; yes, sir.

Q. And does your company not claim that the drain and supply hose must have a fall of not less than one and one-half inches for each foot of length?

A. That is correct.

Q. Why do you claim that?

A. Merely to provide adequate drain for the supply water and the drain water.



(Testimony of H. T. Jarvis)

Q. What is the diameter, the necessary diameter, of the conduits?

A. They vary with every size coil we make.

Q. The water conduits I am talking about.

A. That is what I am talking about also.

Q. Is there any relation necessary relation, between the diameter and the length of the hose as far as the defrosting is concerned?

A. Not within reasonable limits; no, sir.

Q. Well, now, what do you mean by reasonable limits?

A. Well, I mean by reasonable limits if you connected a hose a mile long onto this gadget you wouldn't get enough water through to ever defrost the coil because your pressure drop would be so great.

Q. From a point of view of draining your drain pan and your spray header, is there any necessary relation between [109] the length and the diameter of the hose?

A. I am sorry, I don't believe I understand your question.

Mr. Neave: Do you want the question read?

The Witness: Yes.

The Court: I think we might have a short recess.

(Short recess.)

Mr. Neave: I think there is an unanswered question.

(The question referred to was read by the reporter, as follows:

("Q. From a point of view of draining your drain pan and your spray header, is there any necessary relation between the length and the diameter of the hose?")

The Witness: I don't understand that question.

(Testimony of H. T. Jarvis)

By Mr. Neave:

Q. Well, from the point of view of draining your defrosting unit, does it make any difference how large or how small the diameter of the hose is?

A. Yes, it does.

Q. How large does it have to be?

A. The drainage holes must be large enough to more than take away the quantity of water supplied to the spray pan so that it will never overflow.

Q. Does it make any difference how long the hose is?

A. Yes, I believe it would. [110]

Q. How long does it have to be?

A. Long enough to get on the outside of the low temperature refrigerator.

Q. From the place it is draining?

A. That is right.

Q. Is the spray header entirely enclosed except for the draining holes and the opening for the water to go into it?

A. It is not closed.

Q. It is open on the top?

A. The one we use the most of is wide open. In some instances we use spray headers instead of the pan.

Q. That is, no pan in at all?

A. No pan at all; that is right.

Q. Do you use, or have you ever used, any where it is enclosed on the top and on the sides?

A. Yes, we have.

Q. How does the water drain out of that header?

A. On a pipe that is used for spraying water over the coils where it is entirely closed, it is necessary to put the pipe in on an angle so that the end of the pipe is higher

(Testimony of H. T. Jarvis)

than the inlet and then drill a small hole at the end for an air vent so that the water will drain back out of the supply pipe.

Q. It isn't clear to me where the small hole is, on the [111] end of what?

A. On the end of the supply spray.

Q. Well, now, by that you mean on the end of the header? A. Yes, sir, it could be called a header.

Q. How deep is that header, approximately?

A. That would depend on the size of the coil.

Q. I suppose this hole is in the side toward the top of the header, is that right?

A. That is the usual place to put it.

The Court: What is the header?

The Witness: He is referring to instead of an open pan that we normally use, your Honor, for a shower head spray over this coil we sometimes use a spray header, or just a piece of pipe.

The Court: That is 14 in the patent?

Mr. Neave: That is correct, your Honor.

The Court: That is what you are talking about?

Mr. Neave: That is what I am talking about.

Your Honor, we will have quite a few exhibits to offer in connection with our depositions. Now those exhibits are numbered from 1 up and they are referred to in the depositions by number. It seems to me it might be convenient to keep those exhibit numbers.

The Court: Yes, we will. Have you prepared a type- [112] written list of those?

Mr. Neave: We have them. I don't know that we have them right here.

(Testimony of H. T. Jarvis)

The Court: If you will prepare a typewritten list indicating the depositions and hand them to the Clerk, it will facilitate the matter of keeping records; also one to counsel and one to me, so that whenever you are talking about an exhibit I can have reference to what it is from a short description of it.

Mr. Neave: I would like to have identified now some papers, and I would suggest that perhaps we could start numbering these at the one hundred mark, let us say.

The Court: How many depositions do you have?

Mr. Neave: We have quite a few of them. The exhibits don't go up to 100. There are about 72 exhibits.

The Court: How many deposition do you have which have exhibits attached to them?

Mr. Neave: I think all of the depositions have some exhibits.

The Court: And how many exhibits do you have now?

Mr. Neave: About 72, I believe, your Honor.

The Court: About 72.

Mr. Neave: Yes, I am not positive.

The Court: Perhaps it might facilitate matters if you would take your depositions in order and serially number each [113] one differently, that is, deposition 1, 101, the next deposition would be 201, and so on down to 2501, or whatever it is.

Mr. Lewis Lyon: I think they all usually have an initial before the number, do they not?

Mr. Neave: No, they don't. Only one of them. There are 27 witnesses.

The Court: And each one has depositions?

(Testimony of H. T. Jarvis)

Mr. Neave: Each one had a deposition. I would suggest, if it is convenient to your Honor and counsel, that the exhibits offered or identified during the depositions run as the exhibit numbers given to them there.

The Court: They are given a chronological number in each deposition?

Mr. Neave: No, they run all the way through starting at 1 and going through 72 so that the whole lot of them follow chronologically. [114]

The Court: All right. Then if you leave them that way, I think you can segregate them by taking your first deposition and calling that 1-A, which we will add for trial purposes, and on down to the twenty-seventh, and you can call that 1-AA.

Mr. Neave: Yes.

The Court: So that when you see an exhibit number, you will have your key list of depositions and you will know it is an exhibit to such-and-such a deposition.

Mr. Neave: The point I am making now, your Honor, is that I want an exhibit number for this exhibit.

The Court: All right. What is it?

Mr. Neave: Shall we make it No. 100?

The Court: Is that in the deposition?

Mr. Neave: No, it is not. It has nothing to do with a deposition.

The Court: Very well. We will start yours with 100, serial number 100.

Mr. Neave: All right. I would like to have marked as Plaintiff's Exhibit No. 100, for identification, the title page and pages 592 and 594 of Kent's Mechanical Engineers Handbook.

The Clerk: Do you want this as one exhibit?

(Testimony of H. T. Jarvis)

Mr. Neave: Yes.

The Court: Yes, No. 100. [115]

(The document referred to was marked as Plaintiff's Exhibit No. 100, for identification.)

The Court: Do you have copies?

Mr. Neave: I have, your Honor, but I haven't got them here. I didn't know I was going to use it at this moment.

Q. By Mr. Neave: Mr. Jarvis, I show you Plaintiff's Exhibit 100, for identification, pages 592 and 594, and call your attention on page 592 to Table 1, showing the specific heat of copper at .0951, and on page 594 in Table 6 showing the specific heat of rubber at .481, and ask you if you disagree with those figures.

Mr. Lewis Lyon: Your Honor, I will have to object to that as not cross examination. We didn't go into the question of the specific heat of anything with this witness on direct examination.

Mr. Neave: The witness is qualified as an expert, and I am testing his qualifications.

Mr. Lewis Lyon: As to an expert on specific heat, or anything of that kind? No.

Mr. Neave: On refrigeration.

Mr. Lewis Lyon: That is certainly not cross examination.

The Court: You asked him if he made this contraption. Excuse me for calling it a contraption.

Mr. Lewis Lyon: That is all right.

The Court: I can't think of any other name. This machine [116] under the patent.

Mr. Lewis Lyon: That is correct.

(Testimony of H. T. Jarvis)

The Court: And whether he sold them, and under the patent it says that this will be made of rubber. So you opened the door. The objection is overruled.

Q. By Mr. Neave: Will you answer the question?

A. Will you read the question, please?

(The question was read.)

A. I have no reason to disagree with them.

Q. You don't know whether they are right or not?

A. I don't, no, sir.

Q. When you buy motors for your units, do you get a guarantee from the manufacturer?

A. Yes, we do.

Q. When you defrost a unit, what is the proper practice as to when the unit should be defrosted?

A. Well, our teaching is to the effect that on zero degrees or lower the unit should be defrosted once every 24 hours. However, every job is different in that it is used more often than others, and the amount of storage, and in some jobs it can go as long as two or three weeks without defrosting, but the common practice is once in every 24 hours.

Q. Is it good practice to let the unit accumulate ice on the evaporating coils?

A. It is very bad practice. [117]

Q. What does the term "thermosyphonic" mean?

A. I don't believe I am qualified to answer it.

Q. Well, on the units that you sell do you have a thermosyphonic flow of air over the coils?

Mr. Lewis Lyon: I think that is obviously out of order. The witness has said that he doesn't feel qualified to answer what the term means, so how could he say whether he had or not?



(Testimony of H. T. Jarvis)

The Court: Are you objecting?

Mr. Lewis Lyon: Yes, your Honor.

The Court: On what ground?

Mr. Lewis Lyon: On the ground that the witness is obviously not qualified to answer the question.

The Court: Sustained.

Q. By Mr. Neave: Do you know whether or not there is a thermosyphonic flow of air on the coils?

Mr. Lewis Lyon: The same objection, your Honor.

The Court: He asked whether he knows.

Mr. Lewis Lyon: And he says he doesn't know what the terms means.

The Court: Yes, he said he doesn't know what "thermosyphonic" means.

Mr. Lewis Lyon: The same objection, your Honor.

Mr. Neave: I think the witness can answer whether he knows or not. [118]

The Witness: The only way I can answer, if that will suffice, is to tell you air does go over the unit.

Q. By Mr. Neave: Does what?

A. Does go over the coils.

Q. And is that due to the action of the fan?

A. That is correct.

Q. Referring to Defendant's Exhibit H, which is the license agreement between Refrigeration Engineering, Inc. and McQuay, Inc., dated January 2, 1942, I note that paragraph 5 in part reads as follows:

"The license here granted by Licenser to Licensee is conditioned, and the continuance of the license is conditioned, upon Licensee selling devices under the terms of this agreement, as covered by said Letters

(Testimony of H. T. Jarvis)

Patent No. 2,219,393, at prices not less than that set forth in the schedule of prices as shown by the schedule hereto annexed and marked Exhibit 'A' and made a part hereof."

I show you this Exhibit A of Defendant's Exhibit H, and ask you whether those are the schedules of prices under the license agreement.

A. In order to answer your question, I might tell you that on advice of counsel that privilege to change the prices was withdrawn.

Q. And when was that? [119]

A. Very shortly after the license to McQuay, Inc. went into effect.

Q. Do you recall what date it was withdrawn? This is January 2, 1942, the date of the license.

A. I am sorry, sir. I don't recall the exact date.

Q. What about the other licenses that you granted, Defendant's Exhibit E, F, G, I, J, K, and L, for identification? Do they all contain such a provision?

A. They all do contain such a provision, and they were all withdrawn at the same time.

Q. For how long did you fix prices under any of these license agreements?

A. From the date that the license was made until they were withdrawn.

Q. Well, were they all withdrawn at the same time?

A. I believe they were, sir.

Q. What is the date of the earliest license agreement?

A. I would have to refer to the licenses to answer that question.

(Testimony of H. T. Jarvis)

(The documents referred to were handed to the witness.)

The Court: Are those all the license agreements that your company has?

The Witness: Yes, sir, they are.

The Court: Or have had?

The Witness: Yes, your Honor. Would you read the question [120] again?

The Court: What is the date of the earliest one?

Is there some reason why he has to answer that? Can't you look at them and pass on to something else?

Mr. Neave: I don't know whether they are going to get into evidence or not. If I knew they were going to be offered in evidence, I wouldn't care. They are only marked for identification.

The Court: Do you intend to offer them? Did you intend not to offer them?

Mr. Lewis Lyon: No, I didn't intend not to offer them. I merely took your suggestion, your Honor, of offering one as typical of the group. Rather than encumber the record with all of them, I put in one as representative.

The Court: Very well.

Q. By Mr. Neave: What was the date?

A. July, 1941, appears to be the oldest license.

Q. And what is the licensee?

A. Kramer-Trenton Company, Trenton, New Jersey.

Q. So that from that date until sometime in 1942 you fixed the prices at which your licensees in that period sold the patented devices?

A. I don't recall the date at which that price-fixing, so-called, was withdrawn.

(Testimony of H. T. Jarvis)

Q. Well, between the date of that earliest license and [121] the date it was withdrawn you did fix the prices?

A. We carried out the agreements in exact accordance with the way our counsel drew them up.

Q. Then Schedule A is a price schedule of minimum prices; isn't that correct?           A. Yes, sir.

Q. And Schedule A of the license agreement of July 1, 1941, to Kramer-Trenton Company is the same, is it not,—

Mr. Neave: Well, your Honor, it appears that this agreement, Defendant's Exhibit K, for identification—I will take that back. It does have a schedule.

Q. By Mr. Neave: (Continuing) Will you compare the Schedule A of Defendant's Exhibit K, for identification, with that of the Schedule on Exhibit H, and tell me whether they are alike.

A. No, they do not appear to be identical.

Q. But Schedule A is a schedule of prices?

The Court: What is the materiality of all of this?

Mr. Neave: Well, the materiality, your Honor, is this.

The Court: Is it discrimination?

Mr. Neave: May I ask one more question before I explain?

The Court: All right.

Q. By Mr. Neave: Isn't it a fact, Mr. Jarvis, that the granting and acceptance of these licenses by these licensees was materially affected by the fact that you had a price [122] control provision in these license agreements?

The Court: Let me hear that question.

(The question was read.)

(Testimony of H. T. Jarvis)

Mr. Lewis Lyon: I would like to object to that, your Honor, as trying to get this witness to testify what was in the back of the mind of the other party to the agreement.

The Court: I don't understand the question. Maybe the witness does.

The Witness: I don't your Honor.

The Court: That licenses or licensees were not materially affected—

Mr. Neave: Let me ask this question.

The Court: The objection is sustained. [123]

Mr. Neave: Let me ask another question.

Q. Mr. Jarvis, in negotiating these licenses, did you not use as an argument in obtaining licensees the statement that you were going to control the price of these units?

A. I did not have any arguments with any of these licensees and I did not to my knowledge even refer to the price fixing. The contracts were presented as our attorney, Mr. Lyon, drew them up and they were signed as they were drawn.

Q. And they did contain these price fixing provisions?

The Court: That speaks for itself.

By Mr. Neave:

Q. Your company prosecuted the McAdam patent, did it not?

Mr. Lewis Lyon: That is objected to as not cross examination, your Honor.

The Court: Overruled.

Mr. Lewis Lyon: As to what company prosecuted the application?

The Court: Perhaps you are speaking in a technical sense. One of your opening questions was, what has he

(Testimony of H. T. Jarvis)

to do with this, and he assigned chief engineer McAdam to work on it, and the patent was the result. [124]

Mr. Lewis Lyon: That is correct. This is a technical question of asking who presented the application to the patent office and who prosecuted the application before the patent office. It is certainly not cross examination of any question that was asked of this witness.

Mr. Neave: I think perhaps I can change the question a little bit, your Honor.

Q. You owned the application of the McAdam patent, did you not? A. The corporation owns it.

Q. The corporation? A. Yes.

Q. Now do you know whether or not during the prosecution of the application in the patent office, the company, your company, asked for method claims to be granted to it?

The Court: Your company asked for method claims?

Mr. Neave: To be granted to it in this application.

The Court: To the company as separate from the patentee?

Mr. Neave: As separate from the patentee.

The Court: To be granted to the patentee.

Mr. Neave: To be granted to the patentee; that is right.

Mr. Lewis Lyon: I think the best evidence of that is the file wrapper, which is usually produced. This witness [125] has not been qualified to answer such a question.

The Court: He hasn't been qualified, but he is asking him whether or not he knows. Objection overruled.

Do you know?

The Witness: I don't know. It was handled between Mr. McAdam and Mr. Lyon, your Honor.

(Testimony of H. T. Jarvis)

The Court: Mr. McAdam is the chief engineer for your company?

The Witness: Yes, sir. At the time of this patent matter he was, and he turned over all the test information and the results of our findings to Mr. Lyon.

The Court: Did he conduct experiments?

The Witness: Yes, sir; he did.

The Court: When did you first assign him to the matter of trying to work out this problem?

The Witness: Early in 1937.

The Court: Early in 1937?

The Witness: Yes, sir.

The Court: You paid for all of his experiments?

The Witness: We certainly did.

The Court: The money necessary and the where-withal?

The Witness: Yes, sir. And he conducted the tests right in our own laboratory.

Mr. Neave: That is all.

The Court: Redirect? [126]

Mr. Lewis Lyon: Yes, your Honor.

#### Redirect Examination

By Mr. Lewis Lyon:

Q. On cross examination you were asked if you had ever brought suit against any purchaser of your units. You have sold your water defrost unit to the York Company, the plaintiff in this action, have you not?

A. Yes, sir.



(Testimony of H. T. Jarvis)

Q. Will you refer to your records and determine when the first such sale was made? I believe you had the list in front of you.

A. I am sorry. It is over on the table there. Will you give it to me, please?

(The document referred to was passed to the witness.)

The Witness: I believe the first sale to York Ice Machinery Company was 10-30-39.

By Mr. Lewis Lyon:

Q. But the sale on 8-25-39, Mr. Jarvis, was installed in the Beverly Market in West Los Angeles, was it not?

A. Yes, I beg your pardon. There is a previous sale; 8-25-39.

Q. Did you ever bring suit against the York Company because of their purchase of that unit from you?

A. No, sir; we did not.

Q. Or any other unit, did you? [127]

A. Not of our manufacture; no, sir.

Q. When did you first learn that the York Company, plaintiff, was manufacturing water defrost units in their own behalf?

A. During the war; during this last war.

Q. What type of structure?

The Court: That was a long war.

By Mr. Lewis Lyon:

Q. Let us bring it down closer then. When was that as near as you can recall, Mr. Jarvis?

A. I believe it was early 1943.

(Testimony of H. T. Jarvis)

Q. Will you state the circumstances of obtaining that knowledge?

A. Yes. I was at the York plant, York, Pennsylvania, and saw them going through that plant quite a large order for portable refrigeration low temperature units for the Navy.

Q. I hand you a photograph, Mr. Jarvis—

The Clerk: M for identification.

(The photograph referred to was marked Defendant's Exhibit M for identification.)

By Mr. Lewis Lyon:

Q. I will ask you if you know what is shown in that photograph now marked Exhibit M for identification.

A. Yes, sir, I do know what is shown there. [128]

Q. How does the unit shown in this photograph compare with the unit that you personally observed going through the York plant at York, Pennsylvania?

A. As far as the machinery goes, it is an identical hook-up. There was one exception, that the later Navy units used a smaller plug than this unit that is shown here. That is the insulated plug.

Q. Do you know anything about the development or use, the development of that equipment as shown by the photographic Exhibit M for identification, and its introduction to the armed services? A. Yes, sir; I do.

Q. Will you state the circumstances of that introduction?

A. I personally called on Captain Shuey of the Navy in Washington to try and convince them to use water defrost coils. I made three trips and after the third trip he gave the Weber Showcase Company here in Los An-

(Testimony of H. T. Jarvis)

geles the original order for, I believe, 21 of these units, and this picture that I have in my hand is of the first unit of this type that was ever built.

The Court: Let me see it.

(The document referred to was passed to the court.)

Mr. Lewis Lyon: Will you mark this N for identification? [129]

The Clerk: N for identification.

(The document referred to was marked Defendant's Exhibit N for identification.)

The Court: This is a picture of the compressor side, this isn't a picture of the freezing coil.

The Witness: The freezing unit, your Honor, is mounted on the other side of that panel.

By Mr. Lewis Lyon:

Q. I will hand you another photograph, Mr. Jarvis, marked N for identification and will ask you if you are familiar with what is shown in that photograph.

A. Yes, sir; I am.

Q. What is shown in that photograph?

A. A sectional low temperature walk-in box as used by the armed forces.

The Court: Let me see it.

(The document referred to was passed to the court.)

Mr. Lewis Lyon: I want to ask that these be marked separately for identification.

The Clerk: O, P, and Q for identification.

(The documents referred to were marked Defendant's Exhibits O, P, and Q for identification.)

(Testimony of H. T. Jarvis)

By Mr. Lewis Lyon:

Q. I show you these drawings which have been marked Exhibits O, P, and Q for identification, and will ask you if [130] you are familiar with these drawings.

A. Yes, sir; I am.

Q. What do those drawings show, and do those drawings have any relationship as to the structure shown by the photographs, Exhibits M and N for identification?

A. These drawings are of the first units that we built for the Navy job—the Marines, I beg your pardon.

Q. And those units went into the jobs as shown by Exhibits M and N, did they not?

A. That construction; yes, sir.

Q. These drawings, Exhibits O, P, and Q show the construction of the water defrost units used in those Marine boxes shown by Exhibits M and N, do they?

A. Yes, sir.

The Court: When was M taken and N? What date?

Mr. Lewis Lyon: I will probably have to establish that by another witness, Mr. Carl Weber, who will be here.

The Court: Very well.

Mr. Lewis Lyon: I think they are marked on the back, but this witness I don't believe knows.

The Court: When were those drawings finished? Are they dated?

The Witness: Yes, your Honor. One is dated 10-21-41, the other one 4-14-43, and the other 12-17-41.

Mr. Neave: We can't tell which is which. [131]

The Court: You mean you can't tell which is O, P, and Q?

(Testimony of H. T. Jarvis)

Mr. Neave: Which date applies to which exhibit.

Mr. Lewis Lyon: Exhibit P for identification is dated 10-21-41; Exhibit O is dated 12-17-41; Exhibit Q is dated 4-14-43.

Q. Mr. Jarvis, does Exhibit O correctly illustrate the type of pump that was used in these jobs?

A. Well, it appears to be a very poor drawing of the type of pump that was used.

Q. What type of pump was used?

A. An old-fashioned hand pump as sold by Sears & Roebuck and used out on the farms.

Q. That is an old farm pump that used a hand-operated lever?

A. That is right.

Q. And a reciprocating type of pump, is that correct?

A. Yes, sir. I believe this drawing was of a different type of pump that showed a little different handle arrangement.

Q. That hand pump that you now refer to is shown in the lower right-hand corner of Exhibit M, is it?

A. Yes, sir; that is the type of pump that was used.

The Court: That is the pump that you pump the water in with? [132]

The Witness: That is right.

The Court: That is not the pump to keep the refrigerant solution going through?

The Witness: No, sir; just the water.

Mr. Lewis Lyon: Do you know whether the services were standardized on any type of refrigeration equipment after you introduced this water defrost to them, Mr. Jarvis?

The Witness: I am sorry, Mr. Lyon. I didn't hear the question.

(Testimony of H. T. Jarvis)

(The question referred to was read by the reporter, as follows:

("Q. Do you know whether the services were standardized on any type of refrigeration equipment after you introduced this water defrost to them, Mr. Jarvis?")

The Witness: To my knowledge, all of the armed forces specified water defrost without an alternate for all of their portable low temperature units after the Marines successfully used this installation referred to.

By Mr. Lewis Lyon:

Q. Do you have any knowledge of York Corporation plaintiff having ever manufactured or sold a water defrost system prior to the time that you saw these service boxes going through the plant of the York Corporation at York, Pennsylvania? A. No, sir, I do not. [133]

Q. Mr. Jarvis, with respect to this clause 5 of the existing agreements with your licensees, did you ever at any time modify, change or in any way try to enforce any price control with respect to the operations of the licensees under those agreements?

A. Not at any time.

Q. Did you ever find out what the licensees were charging for the units with reference to any of these agreements? A. No, sir.

Q. On direct examination I believe you were asked a question as to whether or not you advocated that in connection with the water defrost system that rubber hose must be used, is that correct?

A. I was asked such a question; yes, sir.

(Testimony of H. T. Jarvis)

Q. Do you make installations using both metal pipe and rubber and other types of conduit?

A. A great many of them are installed with steel pipe, and we still recommend in our catalog the use of rubber pipe, or rubber hose.

Q. Your recommendations are set forth in your catalog, they are to set forth a set of conditions which you know, if they are followed, will without doubt operate, is that correct?

Mr. Neave: I object to the leading form of the question.

The Court: Yes, that is leading. Objection sustained.

Mr. Lewis Lyon: I will withdraw it.

Q. Why do you set forth particular operating conditions in your catalog, Mr. Jarvis?

A. So that our coils will function properly in the field, and in the case of recommending hose versus pipe, hose does not collect condensation on the outside of the box like steel pipe does, and that is why basically we recommend hose.

Mr. Lewis Lyon: That is all.

The Court: Recross?

Mr. Neave: Yes, sir.

Mr. Lewis Lyon: Your Honor, I might offer at this time Exhibits M, N, O, P and Q in evidence as Defendant's Exhibits with those letters.

The Court: Admitted.

(The documents referred to were received in evidence and marked Defendant's Exhibits M, N, O, P and Q.)

[Note: Defendant's Exhibits M, N, O, P and Q will be found in the Book of Exhibits at pages 1493, 1494, 1495, 1496 and 1497.]



(Testimony of H. T. Jarvis)

Recross Examination

By Mr. Neave:

Q. I understood you to say on cross examination that you made no installations yourself, that is, your company did not install these units. That is correct, isn't it?

A. That is correct. We do not install them ourselves. [135]

Q. And you don't sell any rubber hose?

A. We do not sell any rubber hose.

Q. Now when you said that the armed forces specified water defrost on all portable units, you don't mean to imply that they specified water on all units, just for the portables?

A. I mean to imply and state that to my knowledge on all low temperature jobs that the specifications that I saw after the date of this Marine job specified water defrost. [136]

Q. On small portable units?

A. On all low temperature jobs, whether it was small and portable, or whether it was one that was assembled overseas.

Q. Was that the Army?

A. The Army, the Navy, the Maritime Commission and the Quartermaster.

Q. Did you see all of the specifications, all of the orders?

A. No, sir, that would be quite impossible for one man, to see all the orders that came out of Washington for refrigeration alone during this war.

Q. Your statement is based only on the ones that you saw?      A. That's right.

(Testimony of H. T. Jarvis)

Q. Now, I think you mentioned that you had filed a suit on this patent against Acme Scale & Fixture Company; is that correct?      A. That is correct.

Q. And that suit was filed on December 22, 1941?

A. The date I wouldn't be able to verify.

Q. It was about that time? Do you recall that?

A. I would say that that date might be correct.

Q. What happened to that suit, do you recall?

Mr. Lewis Lyon: That is objected to as certainly not sur-rebuttal, your Honor, and not a proper method of proof.

The Court: Objection sustained. It is not re-cross. [137]

Mr. Lewis Lyon: Thank you for the correction, your Honor.

Q. By Mr. Neave: I don't think that I understood what you said this Defendant's Exhibit N represented, Mr. Jarvis.

A. It represents a panel on which is mounted a refrigeration condensing unit, with a gasoline engine, and the water tank and the pump and all belts and controls and fittings to make a complete hook-up to the coil on the other side of the panel.

Q. Who manufactured that unit?

A. Weber Showcase & Fixture. Their nameplate is right here on the photograph.

Mr. Neave: That is all.

Mr. Lewis Lyon: Just one further question, Mr. Jarvis, or one set of questions.

(Testimony of H. T. Jarvis)

Redirect Examination

By Mr. Lewis Lyon:

Q. During the war were you on any government board or government sponsored board with respect to refrigeration?

Mr. Neave: It would seem to me that that is not redirect, your Honor.

Mr. Lewis Lyon: It goes to his knowledge, his source of knowledge, to connect up his other testimony that so far as all contracts that he saw are concerned, they specified water defrost, and to show that he was in a position to see most of [138] them.

The Court: It isn't of any great significance, and the objection is overruled, because we will get rid of it quicker that way than if we argue it out.

Q. By Mr. Lewis Lyon: Will you answer the question?      A. I beg your pardon?

Q. Were you on any refrigeration boards during the war?

A. Yes, I was the representative on the General Refrigeration and Air Conditioning Industry Advisory Board, representing this industry in the eleven western states on both refrigeration and air conditioning.

Q. And you continued in that position throughout the war, did you?      A. I did.

Q. How often did that position take you to Washington?      A. Once a month, with few exceptions.

Q. How long each month were you there?

A. I was gone from my office on an average of one week out of every 30 days.

(Testimony of H. T. Jarvis)

Q. During that time you were solely concerned with the problems of refrigeration? A. That is right.

Q. And had an opportunity to see and did see the work that the government was doing with respect to refrigeration? A. That is right. [139]

Mr. Lewis Lyon: That is all.

Recross Examination

By Mr. Neave:

Q. Were you consulted by the armed forces as to the type of defrosting that should be put in their units?

A. I don't believe that I was while representing the industry on this committee, if that is what you refer to.

Mr. Neave: That is all.

The Court: That is all. Step down.

How many witnesses do you have all together?

Mr. Lewis Lyon: About seven or eight, your Honor, unless I can cut them down.

The Court: How many do you have in the flesh?

Mr. Neave: I don't think that we will have more than one, and possibly not even one in the flesh.

The Court: And you have twenty-seven depositions, you say?

Mr. Neave: Yes, sir.

Mr. Lewis Lyon: Your Honor, at this time I would like to introduce into evidence page 101-B of Section 210-A, dated February 1, 1936, taken from the York Corporation Instruction Manual as the defendant's exhibit next in order, and I am producing that particularly for the purpose of the York instructions on defrosting.

The Court: Any objection? [140]

Mr. Neave: Yes. I would like to know—

The Court: I don't know. You haven't laid any foundation. I mean, how could I know, or anybody else know?

Mr. Lewis Lyon: I don't believe there is any objection to the fact that it is that. I submitted this to Mr. Neave before, and it is admitted that it is a part of their catalogue.

The Court: Your objection is on other grounds?

Mr. Neave: Yes. So far as the authenticity of this document is concerned, why, we admit it is a York publication.

Mr. Lewis Lyon: And that it came out of the York Instruction Manual.

Mr. Neave: That is correct. My objection to it is that there is no relevance to any issue in this case, as to what is in this manual.

The Court: Let me see it.

(The document referred to was handed to the court.)

Mr. Neave: I am told, your Honor, that it came out of a price book and not the Instruction Manual, for the purposes of accuracy.

The Court: This says "Outside Air Defrosting" and "Hot Gas Defrosting." What is the purpose of showing this,—infringement?

Mr. Lewis Lyon: The material portion is to show what the instructions were, particularly the part I have marked there, where there is a statement— [141]

The Court: I see. "On installations with room temperatures below 32° F., the drain line must be omitted as it would be frozen shut."

Mr. Lewis Lyon: Yes, showing the teaching that if you used water you would freeze yourself up tight. That is made on February 1, 1936, by York Corporation.

The Court: 5-1-33, it says. Oh, "supersedes," I see. The objection is overruled. It is admitted. That is Exhibit R?

The Clerk: Yes, your Honor.

(The document referred to was marked as Defendant's Exhibit R, and was received in evidence.)

[Note: Defendant's Exhibit R will be found in the Book of Exhibits at page 1498.]

Mr. Neave: May I take it that my objection runs to all of this line of exhibits?

The Court: If there is a line.

Mr. Lewis Lyon: Yes, there are several of them.

Mr. Neave: I believe there is a line, your Honor.

The Court: Yes, the same objection and the same ruling.

Mr. Neave: Very well.

Mr. Lewis Lyon: I will also offer at this time page 43 of Section 160 of the same manual, dated December 21, 1934, also having to do with the teachings of the York Corporation with respect to defrosting. And on that I want to say that I am offering both sides of that page, including both pages 43 and 44. [142]

The Clerk: Defendant's Exhibit S.

(The document referred to was marked as Defendant's Exhibit S, and was received in evidence.)

[Note: Defendant's Exhibit S will be found in the Book of Exhibits at page 1500.]

Mr. Lewis Lyon: From the same manual I am offering the next exhibit—

The Court: Exhibit T.

Mr. Lewis Lyon: —T, a circular entitled, "York Utility Air Cooler," bearing the copyright date, "Copyright, York Ice Machinery Corporation, 1934," and particularly the section of that page dealing with defrosting, as marked.

The Clerk: Defendant's Exhibit T.

(The document referred to was marked as Defendant's Exhibit T, and was received in evidence.)

[Note: Defendant's Exhibit T will be found in the Book of Exhibits at page 1502.]

Mr. Lewis Lyon: Also, I would like to advise plaintiff's counsel at the present time of our intention to utilize the article, as it appeared in "The Ice Cream Review," issue of September, 1934, which article is entitled, "Methods of Defrosting Various Types of Hardening Room Coils," by John C. Consley, Engineering Division, York Ice Machinery Corporation.

The reason I am not offering it at the present time is [143] that I do not have copies, and I will try to get them this evening for you.

There is no question, Mr. Neave, is there, but what York Ice Machinery Corporation and York Ice Machinery are the same corporation?



Mr. Neave: The same company.

Mr. Lewis Lyon: Does your Honor desire me to put on futher witnesses this evening?

The Court: No. I think we will recess now until 10:00 in the morning. Do you think you will be able to close this case this week?

Mr. Lewis Lyon: I will do my best, your Honor, but I sincerely doubt it.

The Court: With twenty-seven depositions.

Mr. Lewis Lyon: It depends on what your Honor's desires are with respect to the depositions probably.

The Court: I think that I would rather have the depositions read.

Mr. Lewis Lyon: I agree with you. How many pages are there, Mr. Neave, five hundred and some?

Mr. Neave: I think there are more than that. I think it would be wise if they were read, in view of the fact that they compromise the major part of our case, aside from the publication of the patents.

Mr. Charles Lyon: It took me a week to read them, just [144] sitting by myself.

Mr. Lewis Lyon: You are a slow reader.

The Court: Ten o'clock in the morning, gentlemen.

(Whereupon, at 4:30 o'clock p. m., September 17, 1946, an adjournment was taken until 10:00 o'clock a. m., September 18, 1946.) [145]

Los Angeles, California; September 18, 1946; 10:00 o'clock A. M.

The Clerk: York Corporation v Refrigeration Engineering, Inc., for futher trial.

The Court: Proceed.

Mr. Lewis Lyon: Your Honor, before proceeding, there are a few matters that I noticed in the daily transcript that I would like to call to the court's attention. One is that at the top of page 143, in the introduction of that exhibit, I am afraid there might be a misinterpretation of the court's statement. I appreciate the court's purpose in making that statement, and perhaps I misspoke myself, because it might confuse the record later. I think both sentences could go out.

The Court: All right. It may be stricken. I will just draw a line through it.

Mr. Lewis Lyon: Also in the record on the next page my older brother, Leonard Lyon, appears mysteriously. He hasn't been here. That was me speaking at that time.

The Court: Motion granted. There are two places there.

Mr. Lewis Lyon: Yes.

There is one other part of the record, the discussion between Mr. Neave and myself with respect to the identity of the York Ice Machinery Corporation and the York Corporation. [149] plaintiff in this action, being one and the same.

(Addressing Mr. Neave) That was your understanding of that statement, wasn't it, Mr. Neave?

Mr. Neave: That is right. Where is that, what page?

Mr. Lewis Lyon: The correct statement is that the York Ice Machinery Corporation referred to in these exhibits is the same as York Corporation plaintiff. That is correct, is it not?

Mr. Neave: That is correct.

The Court: That stipulation will now presently clarify any misstatement or misrecording that might be in the record.

Mr. Lewis Lyon: Thank you.

Mr. Neave: There are a number of other corrections I think that ought to be made, but I don't know whether your Honor wants to take them up now or not.

The Court: How many are there?

Mr. Neave: Just a few. On page 138, line 20, the statement there, "Mr. Neave: It would seem to me that that is re-direct, your Honor," that should be: "It would seem to me that that is not re-direct, your Honor."

The Court: Very well.

Mr. Neave: Rather than take up your Honor's time, I might mark this later and bring it to your attention.

The Court: Very well.

Mr. Lewis Lyon: I haven't gone through the transcript [150] in full either. I notice one or two other slight errors.

At this time I would like to call Mr. Howard Lawrence, please.

## HOWARD B. LAWRENCE

called as a witness by and in behalf of the defendant, having been first duly sworn, was examined and testified as follows:

The Clerk: Will you state your name.

The Witness: Howard B. Lawrence.

The Court: L-a-w-r-e-n-c-e?

The Witness: Yes, sir.

The Clerk: And your address?

The Witness: Business address is 3388 South Robertson Boulevard.

The Clerk: Los Angeles or Beverly Hills?

The Witness: Los Angeles 34.

The Clerk: Take the stand, please.

## Direct Examination

By Mr. Lewis Lyon:

Q. Will you state your occupation, Mr. Lawrence.

A. I am an ice cream manufacturer.

Q. How long have you been in that business?

A. Since 1932.

Q. Under what company name do you conduct your business?

A. The Dutch Maid Ice Cream Company. [151]

Q. In conjunction with that business, do you operate or maintain an ice cream hardening room?

A. Yes, sir.

Q. How long have you had such an ice cream hardening room?

A. Since 1932.

Q. Originally what type of refrigeration means did you have in that ice cream plant hardening room?

A. We had iron pipe coils.

(Testimony of Howard B. Lawrence)

Q. Where were those pipe coils extended in the room?

A. There were banks of coils in the ceiling and also on the walls as shelves but they were all hooked to the refrigeration system.

Q. Did or did not those pipes collect frost?

A. Very much.

Q. How was that frost removed?

A. The frost was removed by stopping the ammonia compressor, shutting down the plant completely, and scraping the coils with some steel instrument, or knocking the frost off that had become softened or warmed up. The frost develops into ice after a period of time and you lose refrigeration.

Q. Did the operation of removing that frost cause a rise in temperature of the ice cream hardening room?

A. Oh, very definitely.

Q. Was it necessary to remove the ice cream from the [152] room during defrosting?

A. It was advisable for the preservation of the ice cream.

Q. In November of 1939 you installed a different form of refrigeration in your ice cream hardening room, did you?

A. At that time we built a new factory and installed a new type of refrigeration.

Q. What type of refrigeration was that, Mr. Lawrence?

A. It was a water defrost coil system.

Q. When did you first become acquainted with such a system of defrosting?

A. It was prior to November of '39. We were building the building and looking for something more satis-

(Testimony of Howard B. Lawrence)

factory than the pipe coils, and we had always dealt with the Creamery Package Manufacturing Company. They had heard of a new type of coil that was being put on the market, and we were definitely interested in something better than what we had.

Q. Did you make any investigation of such water defrost system? A. Yes, I did.

Q. In that regard, what did you do?

A. There wasn't any installation in Southern California in a low temperature room such as our requirements were. There were warm rooms, I mean up around 40 degrees temperature, but our requirements were 20 degrees below zero, and [153] there weren't any installations of that type in Southern California. We heard of one that was installed in Fresno and we made a trip up there to Fresno to observe the operation.

Q. By "we" who do you mean, Mr. Lawrence?

A. It was the Velvet Ice Cream Company in Fresno.

Q. You say "we went up to Fresno." Who do you mean?

A. I took my plant manager with me.

Q. And yourself? A. Yes, sir.

Q. And you saw such a water defrost system in operation at the Velvet Ice Cream Company in Fresno, did you?

A. Yes, sir.

Q. Did you see that plant demonstrated in operation?

A. Yes, sir.

Q. Did you also request of Creamery Package Company and the manufacturer of Refrigeration Engineering a guarantee as to the operation of that equipment for your operations before you would permit its installation?

A. Yes, I did.

(Testimony of Howard B. Lawrence)

The Court: Did Refrigeration Engineering, the defendant in this case, install your defrosting system in 1939?

The Witness: No, your Honor. The system was installed by the Creamery Package Manufacturing Company.

The Court: Was it the system of the defendant here, the Refrigeration Engineering system, called the McAdam patent [154] system? Do you know it by that name?

The Witness: I don't know it by that name. It was the Recold coil.

The Court: Recold?

The Witness: Yes.

The Court: Is that the name?

Mr. Lewis Lyon: That is the tradename of Refrigeration Engineering.

The Court: Is that stipulated to?

Mr. Neave: Yes, sir.

The Court: Very well.

What was your question now?

Mr. Lewis Lyon: Did he extract a guarantee from both Creamery Package and from Refrigeration Engineering before he would permit installation of the Recold coil?

The Witness: Yes, I did.

The Court: Was it a Recold system in Fresno that you saw?

The Witness: Yes, sir. The application wasn't—it didn't give me a complete picture of the operation. The plant was in operation at the time, but he couldn't shut down to show us the operation, show us how it would defrost the coil, because, you see, he would have had to pull his switch too. But we saw the coil blower system.

The Court: And talked with him about it? [155]



(Testimony of Howard B. Lawrence)

The Witness: And talked with him, and he was satisfied with it.

The Court: Very well.

Mr. Lewis Lyon: Will you mark this, Mr. Clerk?

The Clerk: Defendant's Exhibit U for identification.

(The document referred to was marked Defendant's Exhibit U for identification.)

The Court: I though we had U last night.

The Clerk: No, T was the last one, your Honor.

The Court: Didn't you mark that article at all?

The Clerk: That is T.

Mr. Lewis Lyon: It wasn't marked, your Honor.

The Court: All right.

By Mr. Lewis Lyon:

Q. I hand you Exhibit U for identification and ask you if you can tell me what that document is.

A. This is a sales slip from the Creamery Package Manufacturing Company for two—do you want the number?

Q. That is all right.

Q. Two No. 2500-LT Recold fan type coils, and one 300 Recold fan type coil.

On this sales slip there is a note at the bottom that "Satisfaction is guaranteed."

Q. Was that slip signed by you?

A. Yes, sir. [156]

Q. Is that a duplicate of any other slip that was also signed at the same time and returned to the Creamery Package Company?

A. Yes. This was my copy of the sales slip. It is a carbon copy.

(Testimony of Howard B. Lawrence)

Q. And by "satisfaction guaranteed," what was your understanding, Mr. Lawrence?

A. I was told that if this type of coil didn't meet my satisfaction the Creamery Package Company would install any type of coil I desired.

Q. Without cost to you?

A. Without cost to me.

Mr. Lewis Lyon: I will offer in evidence the document heretofore identified as Defendant's Exhibit U for identification as Exhibit U.

The Court: Admitted.

(The document referred to was received in evidence and marked Defendant's Exhibit U.)

[Note: Defendant's Exhibit U will be found in the Book of Exhibits at page 1504.]

Mr. Lewis Lyon: Will you mark this, Mr. Clerk?

The Clerk: Defendant's Exhibit V for identification.

(The document referred to was marked Defendant's Exhibit U for identification.)

By Mr. Lewis Lyon:

Q. I hand you a letter, Mr. Lawrence, dated February 27, 1940, and ask you if you can identify that letter? [157]

A. Yes. This letter I wrote to Creamery Package. I understood that they wanted a recommendation or a reference as to my experience with the coils so that they could use it in their business.

Q. Does that letter accurately state the conditions of operation of this Recold unit as you found it at that time?

A. Yes, sir.

(Testimony of Howard B. Lawrence)

Q. Are those units of Recold coils still in operation in your plant?      A. Yes.

Q. Are they still operating in accordance with your statement contained in this letter of February 27, 1940?

A. Yes, sir.

The Court: Have they been changed?

The Witness: No, there hasn't been any change on the coils at all. I have changed expansion valves, but that is not a part of the coil.

The Court: Had you had any experience with any other type of defrosting other than the one you had previously used?

The Witness: Your Honor, I don't believe there is any other type of defrosting.

The Court: Well, gas defrosting, brine defrosting.

The Witness: Oh, yes, of the pipe coils.

The Court: Of the pipe coils?

The Witness: Yes. I went to considerable pains trying [158] to find an easier way to defrosting.

The Court: Did you try brine on your pipes, brine defrosting?

The Witness: No, I never tried brine.

The Court: Have you ever tried gas?

The Witness: I have tried gas, I have tried reversing the action of the compressor and forcing hot gas back through the coils to loosen the ice.

The Court: And you disregarded those in favor of scraping it off with a steel instrument, did you?

The Witness: Yes, sir.

Mr. Lewis Lyon: I will offer this letter, Defendant's Exhibit V for identification, as Defendant's Exhibit V.

The Court: Admitted.

(Testimony of Howard B. Lawrence)

(The letter referred to was received in evidence and marked Defendant's Exhibit V.)

[Note: Defendant's Exhibit V will be found in the Book of Exhibits at page 1505.]

Mr. Lewis Lyon: Will you mark these?

The Clerk: Defendant's Exhibit's W and X.

(The documents referred to were marked Defendant's Exhibits W and X respectively for identification.)

By Mr. Lewis Lyon:

Q. I hand you two photographs marked for identification as Defendant's W and X and ask you if you can identify these photographs, Mr. Lawrence. [159]

A. These were taken in my new plant showing the operation of the coils and showing the operation of the water valves.

Q. You are pictured in each of those photographs, are you?

A. Yes, sir.

Q. When were those photographs taken?

A. In the early part of 1940.

Q. Is the photograph, Exhibit W a photograph showing the inside of the ice cream hardening room?

A. That shows the inside of the hardening room with the coils in operation. The hardening room has ice cream in it.

Q. Will you mark, for the purpose of the record, the two Recold coils which show in that picture? Just mark them "R."

A. (Marking on exhibit as requested)

Q. The photograph X for identification shows the outside of that same box, does it?

A. Yes, sir.

(Testimony of Howard B. Lawrence)

Q. And shows the water control valve for letting the water into the Recold unit for defrosting, is that correct?

A. Yes, and also the outlet of the water.

Mr. Lewis Lyon: I will offer the two photographs as identified by the witness in evidence as Defendant's Exhibits W and X. [160]

Your Honor, this is one of the installations which is our desire that your Honor see. I think the photographs will make a record perhaps of what the court has seen, if the court determines it advisable to make the inspection.

The Court: How big is this room?

The Witness: The room is 22 feet long and 9 feet wide and 9 feet high.

The Court: The defrosting coils are at one end of the room only?

The Witness: Yes, sir.

The Court: Admitted.

(The documents referred to were received in evidence and marked Defendant's Exhibits W and X respectively.)

[Note: Defendant's Exhibits W and X will be found in the Book of Exhibits at pages 1507 and 1508.]

Mr. Lewis Lyon: That is all. You may cross examine.

#### Cross Examination

By Mr. Neave:

Q. Mr. Lawrence, have you been in the ice cream business anywhere but in Los Angeles?

A. No, sir.

Q. Your experience has been only here?

A. Yes, sir.

(Testimony of Howard B. Lawrence)

Q. So far as defrosting and refrigeration is concerned?      A. Yes, sir.

Q. In the installation that you had before you bought [161] the Recold unit, as I understand it, you had pipes over the ceiling and walls. Now what did you do when you tried to defrost that by hot gas?

A. We shut off the suction and discharge valves on the compressor, opened the bypass valves on the compressor. That reversed the action of the compressor, sucking the gas from the condenser and receiver and forcing it back into the coils.

Q. You had only one compressor?

A. Yes, sir.

Q. And one condenser?      A. Yes, sir.

The Court: Did you remove the commodity from the room?

The Witness: No.

The Court: You did not?

The Witness: No.

The Court: How long did it take to defrost, or did it defrost?

The Witness: It wasn't satisfactory.

The Court: Why wasn't it satisfactory?

The Witness: The hot gas would condense in the coils. The coils were of such lower temperature than the gas it would condense back into liquid.

The Court: In other words, it didn't defrost?

The Witness: Only a part. The first part of the coils would defrost but the last part didn't defrost [162]

(Testimony of Howard B. Lawrence)

By Mr. Neave:

Q. Before you bought this unit from Recold, did you ever see any finned coil unit irrespective of the kind of defrosting unit as distinguished from these pipes throughout the room?

A. Would you repeat that statement, please?

Q. What I am trying to get at is this: Did you ever see a package unit like the Recold unit where the coils are all enclosed and there is a fan back of it?

A. Why, yes.

Q. That is a common type of unit?

A. Well, it wasn't at that time. I stated that I went to Fresno to see one.

Q. You had never seen one prior to that time that you saw the Recold unit?      A. No, sir

Q. Or such a unit?      A. No, sir.

Q. Irrespective of the type of defrosting?

A. No.

The Court: When you say such a unit, you mean such a unit as the Recold unit? I think counsel is talking about something else.

Mr. Neave: I am talking about a unit that has fin coils and a fan as distinguished from a pipe installation around [163] your room.

The Witness: The only other one I had seen was the one I went to Fresno to see.

By Mr. Neave:

Q. What installations of other manufacturers did you examine before you bought the Recold unit?

A. I don't believe I examined any.



(Testimony of Howard B. Lawrence)

Mr. Neave: May I see Exhibit V?

(The document referred to was passed to counsel.)

By Mr. Neave:

Q. In Defendant's Exhibit V you state, "The unique system of defrosting using sweet water is accomplished in about 5 minutes' time." When you say "unique system" you mean that you hadn't seen one before?

A. It was different from the ordinary or usual type of coil.

Q. And what was the difference? How did it differ?

A. It was a fan type fin coil in comparison with the iron pipe coil that made it unique.

The Court: Had you seen installations in other ice cream freezing rooms in this community?

The Witness: Only the one in Fresno.

The Court: I mean in your business, had you been in to other ice cream manufacturers' freezing rooms?

The Witness: Yes. [164]

The Court: Did they use the pipe system?

The Witness: Yes, sir; entirely.

The Court: Had you been in to, for instance, the Los Angeles Ice & Warehouse Company?

The Witness: Yes, sir.

The Court: What did they use?

The Witness: They used pipes.

The Court: They use the pipes?

The Witness: Yes, sir.

The Court: Very well.

Mr. Neave: That is all.

(Testimony of Howard B. Lawrence)

Mr. Lewis Lyon: That is all, Mr. Lawrence.

The Court: This witness may be excused?

Mr. Lewis Lyon: Yes, your Honor.

The Court: You may be excused.

(Witness excused.)

Mr. Lewis Lyon: At this time, your Honor, I would like to introduce in evidence the article entitled "Methods of Defrosting Various Types of Hardening Room Coils," as it appears in the September 1934 issue of the Ice Cream Review as written by Mr. John C. Consley, engineering division of the York Ice Machinery Corporation, the article appearing upon page 24, 25, 26, and continuing on page 57 and concluding on page 58 of that issue.

The Court: Admitted. [165]

Mr. Neave: May we have a copy of that?

Mr. Lewis Lyon: Yes, I am getting a copy of it. The photostats aren't available yet.

The Court: They will be available today?

Mr. Lewis Lyon: Yes.

Mr. Neave: May I ask the purpose of the introduction?

Mr. Lewis Lyon: The purpose of the introduction is to show a York publication of plaintiff as to the methods of defrosting; also showing the recognition of the York Corporation at the time of the impossibility of such a method of defrosting as is here in issue.

Mr. Neave: There again I would object to the introduction of the document, if it is introduced in any way as proof of any fact stated in that.

The Court: What is it, an admission against interest? Is that your point?

Mr. Lewis Lyon: Yes, your Honor.

The Court: Let me see it.

(The document referred to was passed to the court.)

Mr. Neave: I don't object to it if it is introduced on the ground of showing what was in the article, but if it is introduced as proving any fact why then of course it is hearsay, unless it proves to be an admission.

Mr. Lewis Lyon: It is an admission against interest, your Honor, and also it establishes the state of the art as [166] published by the York Corporation itself as of that date. It is a complete review of the methods of defrosting.

Mr. Neave: But it has to show it is an admission against interest. However, I have no objection to its being part of the state of the art, as you put it.

The Court: It is offered for those two purposes only?

Mr. Lewis Lyon: That is right.

The Court: It will be admitted and limited to those two purposes. Whether it is an admission against interest or not is for me to decide.

Mr. Neave: That is right.

The Clerk: Defendant's Exhibit Y.

(The document referred to was marked as Defendant's Exhibit Y, and was received in evidence.)

[Note: Defendant's Exhibit Y will be found in the Book of Exhibits at page 1509.]

Mr. Lewis Lyon: Mr. Ruppright.

## SIEGFRIED RUPPRIGHT,

called as a witness by and on behalf of the defendant, having been first duly sworn, was examined and testified as follows:

The Clerk: Will you state your name?

The Witness: Siegfried Ruppright; S-i-e-g-f-r-i-e-d, R-u-p-p-r-i-g-h-t.

The Clerk: And your address?

The Witness: 299 South Atlantic Boulevard.

The Clerk: That is in Los Angeles?

The Witness: Yes, sir. [167]

The Clerk: Take the stand.

## Direct Examination

By Mr. Lewis Lyon:

Q. Mr. Ruppright, are you a member of the American Society of Refrigeration Engineers? A. I am.

Q. I hand you an article or a magazine entitled, "Refrigeration Engineering," issue of June, 1936, and refer you to the article starting on page 351 of that periodical entitled, "Defrosting." Are you familiar with that article? A. Yes, I am.

Q. Was that article presented before any meeting of the A.S.R.E. before it was published in that periodical?

A. Yes, it was.

Q. Where? A. At Skytop in 1936.

Q. Skytop, where?

A. Skytop, Pennsylvania, where the annual spring meeting of the American Society of Refrigerating Engineers was held.

(Testimony of Siegfried Ruppright)

Q. State whether or not that article was presented at that meeting orally.

A. It was presented in writing and it was briefed by me orally.

Q. What was the purpose of presenting it to the meeting before publication? [168]

Mr. Neave: I don't see the purpose of that.

The Witness: May I correct myself, not in writing, in printing. Everybody had a preprint of it in hand.

The purpose of the article—

The Court: Just a minute.

Mr. Neave: Just a minute.

That is a mental concept, as to what his purpose was.

The Court: I think so. Objection sustained.

Q. By Mr. Lewis Lyon: Changing the question, was it the practice of such an association to present these articles to the association meetings before publication?

A. Yes.

Q. Why? A. For discussion.

Q. Was this article so presented? A. Yes.

Q. Was it discussed? A. Yes.

Q. Was there any criticism made by any member of the A.S.R.E. present at that meeting to this article?

A. No, it was not criticized in a negative way.

Mr. Neave: Excuse me, Mr. Witness.

The Court: The question was, was there anything said, and the answer is no, so you can't object to it on the ground of hearsay because there wasn't anything said. [169]

Mr. Neave: Very well, your Honor.

The Court: What date was this meeting?

The Witness: It was in June, 1936. It lasted several days. I could not recall the exact date.

(Testimony of Siegfried Ruppright)

The Court: All right. June, 1936.

Q. By Mr. Lewis Lyon: Were you delegated by any executive officer of the Association of Refrigerating Engineers to prepare this article? A. Yes.

Q. Were you given any particular task by this executive officer in preparing this article? A. Yes.

Q. Who was the officer that instructed you to?

A. David L. Fiske, the secretary.

Q. What were you instructed to do?

A. To write a comprehensive article which would give a picture of the entire art of defrosting as known at the time.

Q. And in doing that did you make any investigation of any kind?

A. Yes. It involved considerable work.

Q. How long did that investigation take?

A. More than a month.

Q. Did this article give a comprehensive history of the art of defrosting as it existed at that time as shown by your survey of the art? [170] A. Yes.

Q. Do you know whether or not engineers from the York Corporation, plaintiff, were present at this particular meeting of the A.S.R.E.? A. Yes, quite many.

Q. Can you name any of them now?

A. Consulting Engineer Morse and the present Chief Engineer Bergdoll, I am very sure I remember they were there, but there were quite many because Skytop is very close to York, Pennsylvania, and it always has been a custom of the company to have quite many of the engineers present. I think there were at least ten men from York.

(Testimony of Siegfried Ruppright)

Q. How many engineers in total were present at this meeting, approximately, as far as you can remember?

A. About two hundred.

Q. And those people are all engineers of the refrigeration art so far as you knew, were they?

A. Oh, at least 90 per cent or so.

Mr. Lewis Lyon: Your Honor, instead of encumbering the record with the entire magazine, I have a photostatic copy of the article here.

The Court: Oh, put in the magazine.

Mr. Lewis Lyon: If you want the magazine put in, I will put in the entire magazine.

I will offer at this time in evidence as Defendant's [171] Exhibit Z the article entitled, "Defrosting," as it appears on pages 351, 352, 353, 354, 355 and as concluded on page 375 of the June, 1936, issue of the periodical, "Refrigeration Engineering," as written by this witness.

The Court: Admitted.

(The document referred to was marked as Defendant's Exhibit Z, and was received in evidence.)

[Note: Defendant's Exhibit Z will be found in the Book of Exhibits at page 1512.]

Q. By Mr. Lyon: Mr. Ruppright, are you familiar with the magazine or periodical, "The Ice Cream Review"?

A. Yes, I am.

Q. Is that a periodical of general publication in the refrigeration art?

A. To the extent that it applied to the ice cream industry.



(Testimony of Siegfried Ruppright)

Q. That is as applied to the ice cream industry, it is a periodical of the refrigeration art of regular publication?

A. It is a regular publication.

Q. And has been since prior to the issue which you have in your hand of September, 1934, is that right?

A. This has been published regularly since 1917.

Mr. Lewis Lyon: That is all.

The Court: Cross-examine.

Mr. Lewis Lyon: Pardon me just a minute.

Q. I hand you a further article, Mr. Ruppright, dated March, 1931, a photostat of pages 191 and 204 of "Refrigeration [172] Engineering" of that date, and will ask you if you are familiar with this article. A. I am.

The Clerk: That will be marked AA.

The Court: What is the name of this magazine?

Mr. Lewis Lyon: "Refrigeration Engineering" issue of March, 1931.

(The document referred to was marked as Defendant's Exhibit AA, for identification.)

Q. By Mr. Lewis Lyon: Are you the author of that article? A. I am.

Q. Did that article appear in "Refrigeration Engineering" written by you as of that date?

A. Yes, it did.

Mr. Lewis Lyon: I will offer the article heretofore identified as Exhibit AA for identification as Defendant's Exhibit AA.

(The document referred to, heretofore marked as Defendant's Exhibit AA, was received in evidence.)

[Note: Defendant's Exhibit AA will be found in the Book of Exhibits at page 1517.]

(Testimony of Siegfried Ruppright)

Mr. Neave: I have no objection to its introduction, your Honor. I just want to call your Honor's attention, however, that if these articles are introduced in an attempt to prove that water defrosting was new, because there is no reference to water defrosting in the articles, the probative value of these articles is very small. I am not objecting to it because I want your Honor to have everything before you, but I am calling that to your attention.

The Court: They are admissible.

Mr. Neave: Yes.

The Court: What weight they are entitled to is a matter which we can determine later.

Mr. Neave: Yes.

Q. By Mr. Lewis Lyon: How long have you been engaged in refrigeration work, Mr. Ruppright?

A. Since 1920.

Q. In that capacity you have operated as a consulting engineer, have you?

A. As a consulting engineer since 1930.

Q. Prior to 1930 what was your connection with the refrigeration art?

A. I served as an engineer for four years with the Frigidaire Corporation, and before that I have handled refrigerating system as far as design, installation and operation is concerned in various parts of the globe for other companies.

Q. Are you a graduate engineer? A. Yes.

Q. Of what university?

A. Of the Engineering College of Hanover, Germany. [174]

(Testimony of Siegfried Ruppright)

Q. What year, Mr. Ruppright? A. 1920.

Mr. Lewis Lyon: That is all.

The Court: Cross-examine.

### Cross Examination

By Mr. Neave:

Q. I think you said on your direct that you spent a month making an investigation in connection with this article which is Defendant's Exhibit Z. Did you not say that? A. Yes, at least a month.

Q. Where were you living at the time that you made this investigation? A. In New York City.

Q. Was your investigation limited to New York City?

A. No.

Q. Where else did you investigate?

A. In the adjacent towns, and I spoke to quite a number of other engineers about the art.

Q. I beg your pardon?

A. I discussed the matter with quite a number of other engineers to find out if I was missing something.

Q. What towns did you conduct your investigation in?

A. Jersey City, I think in York, Pennsylvania, but essentially it was literary work.

Q. Literary work? [175]

A. But I have had practical experience, too.

The Court: As I understand it, you graduated in 1920 in engineering.

The Witness: Yes.

The Court: You then went to work in refrigeration engineering?

The Witness: Not exclusively in the beginning, but I gradually worked into refrigeration exclusively.

(Testimony of Siegfried Ruppright)

The Court: Until 1930?

The Witness: In 1930 I became a consulting engineer

The Court: When did you begin to devote your time to refrigeration engineering exclusively?

The Witness: Exclusively in 1926.

The Court: And you continued in that until 1930?

The Witness: As an employee; yes.

The Court: As an employee?

The Witness: Yes.

The Court: Then in 1930 you were consulting engineer with relation to refrigeration engineering?

The Witness: Yes.

The Court: In that limited field?

The Witness: Yes.

The Court: And have continued in that up until the present date?

The Witness: Yes. [176]

The Court: All right.

Q. By Mr. Neave: Who did you work for in 1927 and 1930? A. Frigidaire Corporation.

Q. In your investigation did you have occasion to investigate the Carnegie Steel Company, the Isabella furnaces in Pittsburgh? A. No, but I know of them.

Q. Did you investigate at that time any uses in Indianapolis? A. No.

Q. Did you investigate at that time any uses in Chicago, at the Illinois Steel Company? A. No.

Q. Did you investigate at that time any uses at the Northwestern Iron Company at Mayville, Wisconsin?

A. I did not confine myself to special installations. I had to find out the complete state of the art.

(Testimony of Siegfried Ruppright)

Q. I am just asking you a question, and if you will just answer my questions we will get along much faster.

What about Yamhill, Oregon, did you investigate anything up there? A. No.

Q. Did you yourself ever operate, build or operate, a water defrosting system prior to 1937?

A. Yes. [177]

Q. Tell us about that.

A. I just used water for defrosting like many people do.

Q. When was that?

A. I think it was as early as 1927.

Q. What kind of a unit was it that you did that with? What was the construction?

A. Just a water hose.

The Court: Was it a commercial unit?

The Witness: It was a commercial unit; yes.

By Mr. Neave: You just took a water hose and sprayed water on it? A. Yes.

Q. And it took the ice off? A. Yes.

Q. Did you ever, prior to the writing of your article, manufacture or use a water defrosting system where there was a spray head over the coils? A. I did not.

Mr. Neave: That is all.

The Court: Redirect?

Mr. Lewis Lyon: Yes, your Honor.

#### Redirect Examination

By Mr. Lewis Lyon:

Q. In this hose system, is it my understanding that you took a hose and sprayed water on a pipe coil, is that what you [178] did? A. On a fin coil.

Q. On a fin coil and a pipe coil? A. Yes.

(Testimony of Siegfried Ruppright)

Q. And in that operation it was necessary to remove the produce from the room before you could make such an operation, was it not? A. Yes.

Q. When you ended up you had ice on the floor, if the room happened to be below zero?

A. It wasn't a below zero room.

Q. It was an above zero room?

A. Nobody would have attempted that at that time unless he started to invent something.

Mr. Neave: I object to that. It wasn't responsive to the question. It is pure opinion.

The Court: He is an expert.

Mr. Neave: Well, I don't know, your Honor. He hasn't shown any expertness in defrosting. He said he never even tried it.

Mr. Lewis Lyon: He said he did try it.

The Court: The motion is denied. You can cross-examine him.

Mr. Lewis Lyon: That is all.

Mr. Neave: That is all. [179]

Mr. Lewis Lyon: May this witness be excused?

The Court: Yes, this witness may be excused.

(Witness excused.)

The Court: We will have a short recess at this time.

(Short recess.) [180]

Mr. Lewis Lyon: Do you desire to interrogate Mr. Ruppright, your Honor?

The Court: Oh, yes.

Q. By the Court: I think in answer to the last question some objection was made, and a motion to strike, and I overruled the objection and denied the motion. You stated that nobody would have attempted to use water with

(Testimony of Siegfried Ruppright)

rubber hose to defrost in sub-zero. You express that as an opinion of yours?      A. Based on my experience.

Q. Based on your experience?

A. With other people.

Q. What is the basis of that conclusion?

A. The water freezes in the rubber hose, and it will freeze—it is expected to freeze everywhere it gets in that sub-zero room.

Q. It would freeze on the floor?

A. It would freeze on the floor.

Q. Freeze on the pipes?

A. Or on the pipes, or in the pipes.

Q. In other words, it would not defrost?

A. It would not defrost except in a few spots and then refreeze.

Q. All right. Now, at what temperature would that occur? Take freezing, 32, how far below freezing could you use a [181] rubber hose and ordinary tap water to defrost? At what temperature is the lowest that that could be done?      A. About 25, 26.

Q. And below that you would have an icing condition?

A. Oh, yes.

The Court: That is all I have. Do you wish further cross examination?

Mr. Neave: Yes, your Honor.

The Court: Or do you have further direct?

Mr. Lewis Lyon: No, your Honor.

#### Recross Examination

By Mr. Neave:

Q. Did I understand you to say, Mr. Ruppright, that the water would freeze in the pipes?      A. Yes.



(Testimony of Siegfried Ruppright)

Q. At below 32?

A. If it is sufficiently below 32 I have seen that happen.

Q. All water freezes below 32?

A. No. I mean in pipes and in hose.

Q. If it is left there?

A. Even while it is running.

Mr. Neave: I see. That is all.

The Court: That is all. You may be excused.

Mr. Lewis Lyon: Mr. Tally. [182]

CAREY K. TALLY,

called as a witness by and on behalf of the defendant, having been first duly sworn, was examined and testified as follows:

Direct Examination

The Clerk: Will you state your name?

The Witness: C. K. Tally, T-a-l-l-y.

The Clerk: And your address?

The Witness: 2905 East 11th Street, Los Angeles.

The Court: What was the name?

The Witness: Tally, T-a-l-l-y.

The Court: Your whole name, your first name?

The Witness: Carey, C-a-r-e-y.

The Court: Very well. You may be seated, Mr. Tally.  
By Mr. Lewis Lyon:

Q. What is your occupation, Mr. Tally?

A. I am manager of the Creamery Package Manufacturing Company, the Los Angeles branch.

Q. How long have you been connected with the refrigeration industry?      A. Since 1928.

(Testimony of Carey K. Tally)

Q. What is your training in refrigeration engineering?

A. Just training as salesman. My experience is primarily dairy manufacturing and processing.

Q. Have you at any time become familiar with the water defrost as put out by Refrigeration Engineering? [183]

A. Yes. My first introduction to the water defrost coil, I believe, was about the last of '39, or somewhere along in there.

Q. Will you explain where you first became acquainted with water defrost?

A. At that time I was assistant manager in charge of sales of this branch, and our manager, Mr. A. J. Cowell—

Q. That is where? At your own place of business?

A. Yes.

The Court: What is that plant?

A. 2905 East 11th Street.

The Court: What is the name of it?

The Witness: The Creamery Package Manufacturing Company.

The Court: All right, counsel.

Q. By Mr. Lewis Lyon: Now, will you explain the circumstances of your first introduction to water defrost?

A. Mr. Cowell, our manager, called me into his office and told me that Mr. Jarvis—

Mr. Neave: Just a moment. I think we are getting into hearsay again.

The Court: Yes, hearsay. It may be stricken.

The Witness: My first introduction to the coil was when Mr. Jarvis came over to the office to tell us about this new coil.

The Court: Well, when was that? [184]

(Testimony of Carey K. Tally)

The Witness: I think it must have been the latter part of '39.

The Court: The latter part of '39?

The Witness: Yes.

Q. By Mr. Lewis Lyon: You say Mr. Cowell was manager of the plant at that time?

A. Yes.

Q. What was his full name?

A. Arthur J. Cowell.

Q. To your knowledge, how long had Mr. Cowell occupied that position at that time?

A. At that time he had been manager since the branch opened here in 1924.

Q. To your knowledge, how did Mr. Cowell receive the idea of water defrosting?

Mr. Neave: I object to that.

The Court: Sustained.

Mr. Lewis Lyon: You Honor, if I may be heard on that matter and in that respect, I would like to call your Honor's attention to Wigmore on Evidence, Volume 3.

The Court: Which edition?

Mr. Lewis Lyon: Section 1790.

The Court: Paragraph 1790?

Mr. Lewis Lyon: Paragraph 1790.

The Court: Section? [185]

Mr. Lewis Lyon: Or Section 1790.

The Court: How does that compare with this Third Edition, do you know?

Mr. Lewis Lyon: I do not know offhand.

The Court: What edition is that?

Mr. Lewis Lyon: This is the 1904 edition. It is a little antique. It is under the title of "Sundry Utterances."

(Testimony of Carey K. Tally)

Mr. Neave: That may be Paragraph 2441 of the Second Edition.

The Court: This is the Third Edition that I have.

Mr. Neave: Well, I only have a translation from the First to the Second Edition.

The Court: "Res Gestae, Verbal Acts. 1790. Utetances as indicating substantially the speaker's own mind."

Mr. Lewis Lyon: That is the paragraph, your Honor.

The Court: That is the paragraph?

Mr. Lewis Lyon: Yes, your Honor.

The Court: Go ahead.

Mr. Lewis Lyon: It sets forth that as far as the hearsay rule is concerned utterances indicating a person's state of mind are a distinct exception to the hearsay rule and are admissible as showing the state of mind, particularly in a condition of this kind.

The Court: That is, the condition of the speaker's mind, it says. Isn't that the witness' mind?

Mr. Lewis Lyon: The condition of the speaker's mind, [186] and another person can testify to that statement made at that time, showing the condition of the person's mind when he made that utterance.

Mr. Neave: I don't so read that, your Honor.

Mr. Lewis Lyon: There are specific examples given, your Honor.

The Court: Well, they point out that the evidence is circumstantial and not testimonial, and for that reason would not be obnoxious to the hearsay rule. I can't see any circumstantial evidence here.

Mr. Lewis Lyon: It is either one, your Honor.

The Court: What is that?

(Testimony of Carey K. Tally)

Mr. Lewis Lyon: It is either one.

Mr. Neave: It depends on what you are trying to prove. If you will look over towards the end of that paragraph it shows the conditions where this may be used; if you are trying to show insanity, or knowledge or belief where it is in point, relevant to the issue, but what we are saying here is that it is not relevant.

Mr. Lewis Lyon: It is clearly relevant to the issue, showing the state of the art and the belief of the engineers, as to their beliefs as to what could be or could not be done at that time, and that their belief on the subject was uniformly that it could be done.

Mr. Neave: That person should be produced when a third [187] person testifies to that.

The Court: I think that is correct.

Mr. Charles Lyon: If your Honor would look at it thus: The plaintiff is stating in its trial brief that the McAdam patent was so obvious it would occur to any one skilled in the art. We show here that men skilled in the art did not believe the obvious, but when they saw it did not believe it, their minds did not receive it. If a man makes such a statement—if the statement that the witness is now testifying to made by this third party indicates his state of mind, you don't have to believe the statement. It isn't hearsay. You are not relying on the truth of that statement. The mere fact that he made the statement is evidence of what his state of mind was at that time, and, therefore, in does not fall within the hearsay rule whatsoever. It is a verbal act. It indicates his state of mind, that it was non-receptive to this idea. Any other act would have the same probative value and would be the same thing. It is not hearsay for that reason, and is generally admissible.

(Testimony of Carey K. Tally)

Mr. Neave: I don't know how much argument your Honor wants on this point, but it seems to me that this gentleman should not be called upon to testify as to what somebody else in his company said. Now, if they want to prove what the state of mind of that fellow was, why not produce him, and then we can examine him. [188]

Mr. Lewis Lyon: I might clear that point with one question.

Q. By Mr. Lewis Lyon: Is Mr. Cowell alive?

A. No, sir.

Q. He is dead. How long has he been deceased?

A. He passed away two years ago the 30th of this month.

Mr. Neave: That shows the protection of the rule. Here is a fellow who is dead, and we couldn't call him ourselves to have him explain why he had that state of mind.

The Court: Yes, I imagine it would be rather difficult.

Mr. Lewis Lyon: To call him, yes.

The Court: The objection is sustained.

Mr. Lewis Lyon: I would like, your Honor, to make an offer of proof.

The Court: All right.

Mr. Lewis Lyon: I don't know in what form your Honor desires that that be made, either to have the witness testify or by my statement?

The Court: I think by your statement.

Mr. Lewis Lyon: I offer to prove by this witness the facts concerning the utterances of Mr. Cowell at the time this problem was shown to him, that his statement, made to this witness when he called him into his office, was that "Mr. Jarvis here has an idea, but I believe it to be entirely

(Testimony of Carey K. Tally)

crazy; but it may have possibilities and I would like to have [189] you listen to his story." That is clearly indicative of the state of the man's mind, as to his reception of the problem, and clearly refutes any argument that the solution which Mr. McAdam made to this problem in the art was obvious to any one.

The Court: The offer of proof is denied on the ground of hearsay.

Q. By Mr. Lewis Lyon: Mr. Tally, after Mr. Jarvis told you his story with respect to water defrost, did you do anything else—you or Mr. Cowell?

A. Yes. Since I had charge of sales, I was very favorably impressed with the coil, and I called a sales meeting, which I think took place the next week, at which time Mr. Jarvis presented the story of his coil to our sales organization.

Q. Following that demonstration by Mr. Jarvis, did you at any time make any sales of the Recold Water Defrost unit?

A. Yes, following that we sold our first installation to the Dutch Maid Ice Cream Company of Los Angeles.

Q. In conjunction with that sale, was it, or was it not necessary for Creamery Package to make a guarantee to the customer of satisfaction or to remove and replace that installation with some other type of equipment?

A. Yes.

Q. Did you make such a guarantee?

A. Yes. [190]

Q. Did you ever have to take out the unit and make any other installation?

A. No, sir.

Q. In that deal did you deal with Mr. Lawrence?

A. Yes, sir.



(Testimony of Carey K. Tally)

Q. Did Mr. Lawrence accept the guarantee of Creamery Package of America?      A. Yes, sir.

Q. Without other investigation?

A. No, he did make some other investigation, but he wasn't still—he still wanted assurance, inasmuch as it was a new idea as far as he was concerned, and he wanted assurance that it would be—you know, that he would have protection.

Mr. Neave: I move that that last part of the answer be stricken, that it was a new idea so far as he was concerned. It doesn't seem to me that is anything that this witness can testify about.

The Court: It may be stricken.

Q. By Mr. Lewis Lyon: Did you take Mr. Lawrence to the office of Refrigeration Engineering, in conjunction with trying to make this sale to him?

A. Yes, we did.

Q. Who did you see at Refrigeration Engineering?

A. We saw Mr. Jarvis, and I believe Mr. Hancock. He wanted to see how the coils were made, so naturally we were [191] very happy to show him.

Q. Were the Recold Coils demonstrated to him at the Refrigeration Engineering plant at that time?

A. I believe they were, yes.

Q. Was an offer made at that time by Refrigeration Engineering to guarantee the installation?

A. Yes sir.

Q. Or to replace it with the same type of guarantee you offered to Mr. Lawrence? Is that correct?

A. Yes, sir.

(Testimony of Carey K. Tally)

Q. Did you take Mr. Lawrence to any other installations of water defrost in Los Angeles?

A. No, sir.

Q. Did you suggest to Mr. Lawrence any other installations that he might see?

A. Mr. Lawrence was interested in seeing an ice cream plant, and we knew of one at Fresno, the Velvet Ice Cream Company, and I didn't go up there with him, but suggested that he go and see that installation. We were familiar with it.

Q. Did you, acting for Creamery Package of America, make other sales of this Recold water defrost in about that period of time?

A. Following this we made quite a few installations that year, yes.

Q. And did you refer other prospective customers to [192] the Dutch Maid Ice Cream plant, to see the operation?

A. Yes, sir.

Q. Was it necessary for you to give guarantees to these other customers of satisfaction, or that you would withdraw, and replace the coils with other systems?

A. No, sir.

Q. After they saw the Dutch Maid Ice Cream plant in operation your difficulties in that regard were removed; is that correct?

A. That's right, yes, sir.

The Court: Have you been installing them continuously?

The Witness: Yes, sir.

(Testimony of Carey K. Tally)

Q. By Mr. Lewis Lyon: Did you give any such guarantee to other special equipment that Creamery Package sells?

A. Yes, sir.

Q. I mean, guarantee of replacement?

A. Not necessarily replacement. Our equipment is guaranteed, and I think generally manufacturers guarantee it a year against defective material. I believe that is customary.

Q. The guarantee that you gave to Dutch Maid was of special character and not like the guarantees you gave with other ordinary equipment; is that correct?

Mr. Neave: I think perhaps we should not have quite so much leading, your Honor please. [192]

The Court: Yes. The objection is overruled.

The Witness: Well, in view of the fact that our guarantee was different there; I mean, because we didn't know, ourselves. It looked good, and after our engineers had analyzed it we saw no reason why it should not work.

The Court: Your other guarantees were against defective equipment?

The Witness: Yes.

The Court: That guarantee was not only against defective equipment?

The Witness: It was a guarantee that if it did not do what we told them it would do we would take it out and put in the conventional type of coil.

Mr. Lewis Lyon: That is all. Cross-examine.

The Court: Cross-examine.

(Testimony of Carey K. Tally)

Cross Examination

By Mr. Neave:

Q. Has your experience in refrigeration been confined to Los Angeles? A. Yes, sir.

Mr. Neave: That is all.

The Court: Step down. This witness may be excused. The next witness.

Mr. Lewis Lyon: Mr. Payne. [194]

JAMES R. PAYNE,

called as a witness by and on behalf of the defendant, having been first duly sworn, was examined and testified as follows:

Direct Examination

The Clerk: Will you state your name, please?

The Witness: James R. Payne, P-a-y-n-e.

The Clerk: Your address?

The Witness: 1652 Redwood Highway North, Santa Rosa.

By Mr. Lewis Lyon:

Q. What is your occupation, Mr. Payne?

A. Refrigeration engineer.

Q. Connected with what company?

A. Payne Corporation.

Q. Located where? A. Santa Rosa, California.

Q. What is your experience or training in refrigeration engineering?

A. I have been in the business since 1922. I have taken a course in international—I mean at Sebal Institute of Technology, along with my practical experience and training.

(Testimony of James R. Payne)

Q. Where is that Institute of Technology located?

A. In Philadelphia.

Q. Did you graduate from that course? A. Yes.

Q. After you concluded that course, were you employed [195] by any concern?

A. A number of them.

Q. In refrigeration? A. Yes, sir.

Q. Including whom?

A. The Gay Engineering Corporation, National Ice and Cold Storage, and Haslett Warehouse Company.

Q. When were you first employed by the Haslett Warehouse Company? A. In 1932.

Q. What was the business of the Haslett Warehouse Company at that time?

A. Commercial cold storage.

Q. Where? A. In Oakland, California.

Q. What were your duties when you were first employed by that company? A. Chief engineer.

Q. In conjunction with that company's business, did they have a refrigeration system for maintaining their rooms below freezing? A. Yes.

Q. What type of equipment were they using?

A. Pipe coils.

Q. Did they have any method of defrosting? [196]

A. They had one room equipped with a defrosting system when I took over that had not been used for evidently a number of years.

Q. What type of system was that?

A. It was a brine spray system.

(Testimony of James R. Payne)

Q. At what temperatures was that room maintained at that time?

A. It was supposed to be maintained at zero, and at the time I took the plant over it was 15 above.

Q. It was in operation when you took the plant over?

A. It was in operation, yes.

Q. Why was the temperature, if you know, 15 degrees above zero when it was intended to be maintained at zero?

A. The ice accumulation was so great on the pipe that they could not get the temperature any lower than that.

Q. Did you do anything or try to do anything to rectify that situation?

A. I tried to use their defrosting system that was installed there.

Q. That is the brine system you referred to?

A. Yes.

Q. What did you do in that regard?

A. I mixed up batches of brine. What I mean by batches, they had a reservoir that they used for calcium brine, mixed calcium brine in, then used a pump by means of circulating this [197] brine through a series of spray nozzles over the pipe, and running into a pan below the pipe, then back into the reservoir again.

Q. How long did it take you to defrost, or how long did you endeavor to use that system to defrost that coil?

A. Just once.

Q. Did you effect a defrosting? A. Effect a—

Q. Did you complete the defrosting of the coil?

A. I completed that course of defrosting.

Q. How much brine did you use, or how much—

A. In gallons I could not say.

(Testimony of James R. Payne)

Q. How much calcium chloride did you use?

A. In pounds, I don't know, except that the management told me that I had spent \$150.00 on calcium chloride brine for that defrosting job when I had the defrosting completed.

The Court: How long did it take?

The Witness: Three days and nights.

The Court: You had it shut off?

The Witness: Yes, sir.

The Court: The freezing unit?

The Witness: Yes, sir.

The Court: Did you move the butter out of the room?

The Witness: Yes, sir, I had to. The temperature was going too high. I couldn't leave it in there. [198]

The Court: What was the temperature of the room when you finally completed the defrosting?

The Witness: Before I started my equipment, and refrigeration equipment, you mean to say?

The Court: Yes.

The Witness: It was about 30 above zero.

Q. By Mr. Lewis Lyon: When you started the equipment what did the equipment take the temperature down to?

A. Down to 5 below zero.

Q. During your experience with defrosting, did you run into any difficulty in icing with the use of that brine?

A. Well, that is why I had to use so much brine, because it would become diluted and cause an icy slush in my pan, catch-pan, below the coil assembly, and that would have to be raked out to prevent plugging my pipe back to my pump for recirculation.



(Testimony of James R. Payne)

Q. It is my understanding, then, to effect a complete defrosting that you spent \$150.00 in buying calcium chloride; is that correct? A. That's right.

Q. And all that calcium chloride was used in that one defrosting operation? A. Yes, sir.

Q. Are you familiar with the system of water defrost?

A. I am now, sir. [199]

The Court: You mean Recold?

Q. By Mr. Lewis Lyon: Of Recold, the Recold system of Refrigeration Engineering. A. I am.

Q. When did you first become acquainted with that system?

A. About the middle of 1940; I would say between April and July of 1940.

Q. Will you explain fully the circumstances of your becoming acquainted with or your introduction to water defrosting?

A. I was approached by Mr. Jarvis and Mr. Brown at the time I was installing a new freezer room for government butter storage and government turkeys.

Q. That is Mr. H. T. Jarvis here that you refer to?

A. Yes, sir.

Q. And Mr. Wyatt Brown? A. Yes, sir.

Q. Also here? A. Yes, sir.

Q. How far was the job along of construction of this new refrigerating storage room at the time Mr. Jarvis and Mr. Brown contacted you?

A. The insulation of the room was just about at completion. The machinery had been ordered, as well as the pipe. [200]

Q. What kind of pipe?

A. Two-inch black wrought-iron pipe.

(Testimony of James R. Payne)

Q. For what kind of a refrigeration system?

A. Just an overhead coil.

Q. That is a continuous overhead coil system that was hung from the roof, made out of open pipe; is that correct?

A. That is right.

Q. Was such a system installed in that warehouse?

A. Yes, we had three other systems of the same nature.

Q. In this new room, was that system installed?

A. No, that system was not installed.

Q. Do you recall the date when you were first told by Mr. Jarvis and Mr. Brown about this Recold water defrost system?

A. I don't recall the date. I would say it was March or April possibly May. It was within those three months.

Q. Had you ever heard of any such system before that?

A. No, I had not.

Q. After you were informed of that system, did you make any investigation to find out whether or not it would work?

A. Yes, I visited two; one ice cream hardening room and one bakery.

Q. Where were those located?

A. San Francisco.

Q. How large was this particular room that was under [201] construction at that time?

A. 103 feet long, about 31 feet wide, with a 10 foot ceiling.

Q. Were Recold coils subsequently installed in that room?

A. Yes.

Q. How many of them?

A. Thirteen.

(Testimony of James R. Payne)

Q. Of what size, do you know?

A. I believe they are called their No. 2500-LT. In tons of refrigeration that is approximately one and one-quarter tons as the rating—their catalogue rating gives it.

The Court: You mean to refrigerate one and one-quarter tons—

The Witness: Per unit.

The Court: —of commodities?

The Witness: Yes, sir.

The Court: How long would the temperature of that room have to be kept?

The Witness: The government required 20-minus for butter and plasma and it was pulled as low—the temperature was lowered on the test run to 40 below for approval.

The Court: 40 below?

The Witness: Yes, sir. [202]

The Court: And the requirement for its use was 20?

The Witness: Yes, sir.

The Court: At least 20?

The Witness: That's right.

Q. By Mr. Lewis Lyon: To your knowledge, is that system still in operation? A. It is, sir.

Q. It is a successful operation — A. Yes, sir.

Q. —in using the system of water defrost?

A. Yes, sir.

Q. How often is that system defrosted, to your knowledge?

A. It depends on the load of merchandise.

Q. At each time, to your personal knowledge, that the defrost has been undertaken in that system, it has been successful or is that statement incorrect?

A. It has been very successful.

(Testimony of James R. Payne)

The Court: Have you had to move the commodities out of the warehouse to defrost?

The Witness: At no time.

Q. By Mr. Lewis Lyon: Has there been such a temperature rise inside the refrigeration chamber itself at any time to make it advisable to change the position of the merchandise in the chamber?

A. There has been no difference, no change of temperature, [203] or difference in merchandise, or no change of temperature in the room, because one coil can be defrosted at a time or all at one time. So in order to avoid any slight temperature difference, I am speaking now of the period during the war which was very critical for blood plasma and government butter storage, and it was requested that a very steady and definite temperature be maintained, and for that reason we defrosted one coil at a time, to avoid any possible change of temperature.

Q. You say that blood plasma was stored in this warehouse? A. Yes.

Q. For how long a period?

A. It extended over the duration or over the period of the war, but as far the length of time that each shipment would stay, it is hard to say, because one time it would come in and stay one day, and again it would stay two or three months. But it would come in by the ton, and they would work out of this quantity from there to the laboratories, as well as overseas shipments.

Q. And the room performed successfully its functions in meeting the cold temperatures of that blood plasma at all times?

A. Very successfully. We got very good reports from the government.

(Testimony of James R. Payne)

Q. While the plasma was in there, the room had to be [204] defrosted; is that correct?

A. That is correct.

Q. And it was defrosted using this system of water defrost? A. That is correct.

Q. Are you a member of the American Society of Refrigeration Engineers? A. I am.

Q. Are you also a member of the N. A.—

A. N. A. P. R. E., National Association of Practical Refrigerating Engineers?

Q. Yes. A. I am.

Q. How long have you been a member of those associations?

A. The N. A. P. R. E. since 1925, and the A. S. R. E. since 1942, I believe.

Q. What distinction is there between those two associations, if there is one?

A. N. A. P. R. E. is an association for practical purposes, such as operating engineers, to better the understanding of equipment, machinery, and so forth. The A. S. R. E. is for scientific studies.

Q. That is the distinction you would make, that one is an organization of practical engineers—

A. One is practical, and the other scientific. [205]

Q. —and the other is an organization of scientific engineers? A. That's right.

Q. I hand you, Mr. Payne, Defendant's Exhibit C, for identification, and ask you if you are familiar with that article. A. Yes, sir, I am.

Q. I notice in the body of that article a letter on the letterhead of the Haslett Warehouse Company, apparently

(Testimony of James R. Payne)

signed "James R. Payne." Do you know anything about that letter?

A. I wrote that letter, sir.

Q. Was that article taken up with you and discussed before it was printed or released?

A. No. Mr. Jarvis asked me to express my satisfaction with the operation of that job, and also asked me if it would be permissible with me to have it printed in an engineers' magazine, and I said—I gave him my consent.

Q. That is, the article was submitted to you before it was printed; is that correct?

A. No, not the article.

Q. Oh, you mean the letter?

A. The letter.

Q. I see. Have you read completely the article, as is appears, in Exhibit C?

A. You mean the letter, or the entire page? [206]

Q. The entire article.

A. I read it some time ago; shortly after it was printed.

Q. Does that article express the true condition of the operation and construction and the size of the Haslett Warehouse job, to which you have testified?

A. As far as I know, there are no mistakes.

The Court: Are you engaged in the business of installing refrigeration equipment now?

(Testimony of James R. Payne)

The Witness: Yes, sir.

The Court: Have you installed other of these Recold units?

The Witness: I have two jobs going in now. A 50-minus room for Swift & Company in San Francisco, using the water defrost—

The Court: That is Recold?

The Witness: —Recold, and for the Honor Brand Frozen Food Company I also have a large room, twice the size of this one that is in question at the moment.

The Court: The 130-foot room?

The Witness: It is 136 feet, by 47, by 12 feet high.

Q. By Mr. Lewis Lyon: That is also using Recold coils? A. Also with Recold Water Defrost.

Mr. Lewis Lyon: I would like to introduce the article, Exhibit C for identification, as Defendant's Exhibit C.

Mr. Neave: I object to the article, your Honor, unless the introduction of the article be limited to the letter and [207] to the statements of the size, the footage, and so forth, of the room in question. The article contains a number of other statements that are statements of this H. G. Kirkwood, which are completely hearsay statements. If the offer is limited to those things that the witness identified, I have no objection.

Mr. Lewis Lyon: If there are any statements that can be pointed out in this article that the witness has not



(Testimony of James R. Payne)

verified and which are statements of Mr. Kirkwood, as distinguished from facts this witness has verified, I have no objection to their being excluded.

The Court: He said he read the article at that time and they correctly stated the condition of the art at that time.

Mr. Neave: I think all he stated was that it correctly represented the conditions of his plant. Now, the last two paragraphs—

Mr. Lewis Lyon: That is not true.

The Court: No, I think he stated that the article correctly reflected his opinion of the condition of the art. Is that correct?

The Witness: Yes.

Mr. Neave: I didn't so understand.

The Court: It is admitted.

Mr. Neave: I object to the last two paragraphs of the article as purely hearsay statements of this writer of the [208] article.

The Court: The objection is overruled.

(The document referred to was marked as Defendant's Exhibit C, and was received in evidence.)

The Court: We will recess until 2:00 o'clock.

(Whereupon, at 12:00 o'clock noon, a recess was taken until 2:00 o'clock P. M. of the same day.) [209]

Los Angeles, California; September 18, 1946, 2:00 o'clock P. M.

The Court: Ex parte?

The Clerk: No ex parte, your Honor.

The Court: Proceed.

Mr. Lewis Lyon: Mr. Payne.

JAMES R. PAYNE

the witness on the stand at the time of recess, resumed the stand and testified further as follows:

Direct Examination (Continued)

By Mr. Lewis Lyon:

Q. Mr. Payne, what was the capacity of this Haslett Warehouse job, say taking butter as a stored product?

A. In pounds or cubic foot displacement?

Q. In pounds.

A. In pounds it was something over a million pounds. I think it was about a million and a quarter pounds total.

Q. Have you ever estimated the increase in cubic capacity of the room using the Recold water defrost system as compared with the pipe system that you were going to install?

A. Yes. I figured that out and made the comparison. However I don't remember the exact figures. I do remember that using butter as an example it would take about five years to pay the installation between the saving of the two.

Q. That is, in the saving of space it was enough to [210] pay for the entire refrigeration system in five years' time, is that correct?

A. That is true.

(Testimony of James R. Payne)

The Court: How many cubic feet is a million pounds of butter?

The Witness: About 30,000, if I remember right.

By Mr. Lewis Lyon:

Q: Before you installed these Recold—

The Court: Just a moment.

The Witness: Pardon me.

The Court: Did you say the saving in space would pay for the entire installation in five years, or did I understand you to say from your previous answer, or mean from your previous answer, that the difference in cost between the two installations would be that?

The Witness: No, sir. The difference in space saving.

The Court: Would in five years pay the entire cost of the installation of the Recold?

The Witness: Of the equipment; yes.

Your Honor, may I make a correction?

The Court: Yes, surely.

The Witness: I said 30,000; I meant 300,000. [211]

Q. By Mr. Lewis Lyon: Before you installed this Recold system in the Haslett job, was any special guarantee given or extracted from your supplier?

A. Yes, sir.

Q. What was that guarantee?

A. It was a six months guarantee.

Q. Was it of any specific character as to changing types of structure or reinstallation of another type in event of failure?

A. I would have to— I don't remember the guarantee word for word. However, I do know that the guarantee covered removing the Recold coils, and how far it went

(Testimony of James R. Payne)

towards replacing them with a pipe coil system that we had originally planned on using, I don't know. I would have to read that over to be sure.

The Court: Can you tell me this: In the two systems do you use the same compressor equipment?

The Witness: Yes, sir.

The Court: And do you use the same volume of freezing refrigerant?

The Witness: Yes, sir.

The Court: For the two systems?

The Witness: Yes, sir. Well, chances are you would use more ammonia in the pipe system than you would in the Recold blower coil because of the increased pipe size. [212]

The Court: Pardon me. Another question: In the Recold system for that warehouse—

The Witness: Yes, sir.

The Court:—did you use the same number of lineal feet of pipe?

The Witness: No, sir.

The Court: Would you use more or less?

The Witness: Let's have the question again, please?

The Court: In the Recold sysetem was the same number of lineal feet used for conveying the refrigerant as in the so-called pipe system system, or do you know?

The Witness: Yes, sir, I do know approximately; not exactly. The same amount of pipe, lineal feet of pipe from the room to the compressors. That was the same, but for the coils far less pipe, lineal feet of pipe; that is, with the blowers far less lineal feet of pipe than the overhead pipe coils.

(Testimony of James R. Payne)

The Court: That is, the Recold system for each unit had four lineal feet less?

The Witness: Not four less. It had many feet less.

The Court: Oh, many feet less?

The Witness: Yes. I don't know the exact comparison.

Q. By Mr. Lewis Lyon: The total lineal feet of the type containing the refrigerant in the 13 units that were installed, how did that compare with the total number of lineal feet of [213] the overhead pipe?

A. I wouldn't know that.

Q. Was it less or more?

A. It was far less.

Q. It was far less, did you say?

A. Yes.

Q. You have explained to me the operation of this room during war-time conditions. Is it true or not that, using the pipe coil system, you could have maintained the capacity in the operation of this Haslett warehouse the same in using the overhead pipe system and using the Recold blower system during your war-time operations?

A. Could I have stored as much products?

Q. Yes. A. No, I could not.

Q. Will you explain just what the operations were in war-time as to the amount of merchandise moved in and out of that room?

A. Speaking in pounds, we handle from 30 to 45 thousand pounds daily through this room.

Q. That is, there were thirty-five to forty thousand pounds coming in and equally thirty-five to forty thousand going out? A. That's right.

(Testimony of James R. Payne)

Q. What kind of a load—I mean, what kind of a [214] defrosting problem did that present?

A. It presented no defrosting problem with the Recold blowers that we had in there. [215]

Q. Well, if you had been using coils, what kind of a defrosting—I mean, overhead pipes, what kind of a defrosting problem would that kind of a load present?

Mr. Neave: I don't see that he would know, your Honor. He hasn't had any experience with that.

The Witness: Yes, I have.

Mr. Neave: I beg your pardon. Just tell us about it then.

The Witness: I think I made the statement before that we had three other rooms with overhead coils of the same type that this room had been planned, and our defrosting problem there was almost continuous. What I mean by that, we had a crew going continuous—that was not daily but day and night; we had day and night crews—going continuously defrosting and by either moving the merchandise or spreading tarpaulins over the merchandise and scraping the ice off.

By Mr. Lewis Lyon:

Q. That is, in these other three bare pipe rooms?

A. Yes. That would have applied to this room if we had used over head pipes. Therefore we wouldn't have been able to handle the volume of merchandise.

The Court: You used the method of scraping the ice off?

The Witness: Yes, sir, and unless we emptied the room out and then we could circulate hot gas and let it all fall at one time, but we had to get in there with scoop

(Testimony of James R. Payne)

shovels [216] and scoop it out before it had a chance to freeze to the floor.

The Court: When you scraped the ice off the coils, did you cut off the refrigerating machinery then?

The Witness: No, sir, we did not.

The Court: You mean you worked in those rooms at 20 below zero?

The Witness: These rooms didn't run 20 below; they ran about 5 below.

The Court: So you left your refrigerant on?

The Witness: Yes, sir.

By Mr. Lewis Lyon:

Q. The only room that you operated during the war at 20 degrees below was the one containing the Recold units in it, is that correct?

A. That is correct.

Mr. Lewis Lyon: That is all.

The Court: Cross examine.

### Cross Examination

By Mr. Neave:

Q. I think you stated that this room was 103 by 30 by 10, is that right?

A. 31, something like that. I don't remember the exact figures. That was only approximately.

Q. Doesn't that make 30,000 rather than 300,000 cubic feet? [217]

A. I was right in the first place. Thanks for the correction.

Q. Now this increased capacity due to the Recold unit that you are talking about, that was due to the fact, wasn't



(Testimony of James R. Payne)

it, that you had coils concentrated in a unit with fins on the coils and a blower?

A. May I have the question again?

The Court: Read the question.

(The question referred to was read by the reporter, as follows:

("Q. Now this increased capacity due to the Recold unit tht you are talking about, that was due to the fact, wasn't it, that you had coils concentrated in a unit with fins on the coils and a blower,")

The Witness: That is correct.

By Mr. Neave:

Q. That is, you had a package unit which did not take up very much space? A. That is true.

Q. As compared with pipes on the sides of the room?

A. On the side or ceiling; yes.

Q. Were those pipes that you had in the other rooms, or that you were going to place in this room, on the side as well as the ceiling?

A. No, they were on the ceiling. [218]

Q. Only on the ceiling? A. Yes, sir.

Q. How did that interfere with the capacity of your room?

A. It lowers your ceiling height.

Q. How deep is that?

A. About two and a half feet.

Q. So that you could not pack it up to the top of the ceiling? A. No, sir.

The Court: May I interrupt you?

Mr. Neave: Yes.

(Testimony of James R. Payne)

The Court: I understood you to say that the increased capacity was due to this package unit. Could you have had the package unit, that is, with the fins and the blower, if you had not had the Recold defrosting?

The Witness: No, sir.

The Court: You have seen that in operation or attempted operation?

The Witness: The Recold blower?

The Court: No, not the Recold, I mean the fins and coils instead of pipes.

The Witness: Well, I had never seen them in a low temperature room in operation; no, sir.

The Court: All right. [219]

By Mr. Neave:

Q. At the time that you bought these units did you inquire from any other manufacturer as to such units for this purpose? A. No, sir.

Q. So that you don't know whether or not at that time there were unit packages with fin coils and blowers?

A. Yes, for high temperatures.

Q. Do you know whether there were for low temperatures?

A. Only from literature that had been mailed to me from this engineering association which I am a member of, and that had been proven at one of our meetings by Mr. Jarvis. I wasn't there at the meeting, I was in the hospital.

Q. But you didn't know of any other manufacturer other than Refrigeration Engineering?

A. No, I didn't

(Testimony of James R. Payne)

Q. It didn't come to your attention?

A. No.

Q. You spoke of a room that you defrosted with brine. Now as I understand it, those were pipes, were they not, that were defrosted?

A. Yes, sir.

Q. Were those pipes on the ceiling?

A. No, sir, they were built in a bank.

Q. On the side of the room? [220]

A. They were built within a room, a bunker as we call it. Instead of being enoused by metal they were enoused by lumber.

Q. Was there any way that a forced draft circulation was had, a fan or something of that sort?

A. There was a fan mounted in a tunnel, not within this bunker space but off to one side, creating a forced circulation through the bunker.

Q. That is what caused the cold air to get into the refrigerated space from the bunker?

A. That is right.

Q. What was the size of those pipes?

A. Two inches.

Q. And how many feet were they?

A. I wouldn't attempt to guess.

Q. How long was the bunker?

A. Approximately 22 feet.

Q. And how high was it?

A. Approximately 8 feet.

Q. And how deep was it? How many rows of pipes did it have?

A. I don't remember.

Q. You don't remember?

A. No, sir.

Q. Was it more than one row? [221]

A. Oh, yes, there was a number of rows.

(Testimony of James R. Payne)

Q. Ten?

A. I wouldn't say whether it was 10 or 15. Chances are it would run in the neighborhood of 10. It may have been as many as 20.

Q. How far apart were these pipes from each other, do you know?

A. Approximately six inches.

Q. In each direction, up and down and sideways?

A. Approximately.

Q. Now you spoke of there being a tank I believe in which a brine solution was kept?

A. Mixed.

Q. It was from that tank that the brine solution was sprayed on the coils?

A. Yes, sir.

Q. How big was that tank?

A. It held 500 gallons.

Q. Was there a spray header that went over the top of the coils?

A. Yes, sir.

Q. What was that spray header?

A. It was, I believe, 2-inch pipe with spray nozzles on about 12-inch centers.

Q. How many of those pipes were there? [222]

A. One over each bank, each series of coils.

Q. How many would that make?

A. Whatever number of banks of coils we had in there, whether it was 10 or 20.

Q. I suppose that when you started defrosting the condition of the coils was that they were all covered with ice?

A. Yes. [223]

Q. And there was very little space between the coils?

A. That's right.

(Testimony of James R. Payne)

Q. How long had it been since those coils had previously been defrosted?

A. From what I had been told by engineers working there at the time that I took the plant over, they had never been able to get a complete or total defrosted job. That is why I was asked to spend the money that was necessary to get a complete, total defrosted job and try to lower this temperature.

Q. How long has that installation been in operation?

A. I believe it was put in in 1927.

Q. And the period you are talking about was—

A. 1932.

Q. 1932. Is that your only experience with brine defrosting?      A. I believe it is.

Q. Do you know what the price of the brine was,—of your calcium chloride was per hundredweight?

A. About three cents a pound, if I remember right.

Q. Now, in your defrosting at present, do you use tap water?      A. Yes, sir.

Q. City water, is it?      A. Yes, sir.

Q. What is the temperature of that water, do you know? [224]

A. That water runs about 70 degrees.

Q. How long does it take you to defrost?

A. I don't think it exceeds seven minutes to the unit.

Q. I suppose it defrosts first at the top, the top coils are the first defrosted, underneath the spray?

A. Well, I imagine it works that way inside the housing. However, the frost starts disappearing at the bottom of the coil just about as quick as it does at the top, looking at the face of the unit.

(Testimony of James R. Payne)

Q. Have you ever looked into the housing while it was being defrosted?

A. I couldn't very well without getting wet. I haven't taken the housing apart to watch that.

Q. What is the temperature of the coil after it has been defrosted and before you put the unit into operation?

A. Well, I have defrosted those units in operation.

Q. Well, suppose that it is not in operation.

A. If it is not in operation, I imagine it would be about the same temperature as the water, or near that; the chances are 10 degrees difference.

Q. Have you ever taken those temperatures when you actually left the refrigerant in the coils?

A. That would be a difficult thing to do.

Q. You haven't done it?

A. No, sir. [225]

The Court: Have you taken the temperature of the air in the room?

The Witness: That doesn't change, your Honor.

The Court: It doesn't change?

The Witness: No, sir.

Q. By Mr. Neave: That is because the operation is going on inside of this unit?

A. No, sir. That is because I had to defrost only one unit at a time, and I had twelve other units operating at this same time to avoid any change in temperature.

Q. I see. You haven't defrosted all twelve together at the same time?

A. Oh, I have. I have defrosted them all together, but not during the period that the government had this merchandise in there, and we were working under very strict orders.

(Testimony of James R. Payne)

Q. You didn't want to take that chance?

A. It wasn't advisable.

The Court: What happened when you did defrost them all at once? Did the temperature in the room materially change?

The Witness: It made a difference, a temperature difference about 10 feet away from the coils.

The Court: Up to about 10 feet?

The Witness: Yes, sir.

The Court: Within 10 feet?

The Witness: Within 10 feet of the coil, or about 10 feet [226] from the coil, there is a noticeable temperature difference along the ceiling. But at 20 to 30 feet from the coils I have checked very closely with thermometers, with the merchandise stored within, and I have recorded no temperature change, and in less than five minutes after the units are put back in operation your temperature seems to equalize, and it picks up what small amount of heat there is floating near the ceiling, just about in that length of time, so your room or the food stored within the room doesn't have time to change in temperature.

The Court: So that if you defrost the entire bank of 13, you do that in seven or eight minutes?

The Witness: Yes, sir.

The Court: And in that seven minutes time there is a temperature change as far out as 20 feet, you say?

The Witness: Ten feet, sir.

The Court: Out as far as 10 feet?

The Witness: That is the most I have noticed.

The Court: And the temperature of the merchandise remains constant?



(Testimony of James R. Payne)

The Witness: That's right.

The Court: And after seven or eight minutes, within five minutes the whole room comes back—

The Witness: Comes back to normal.

The Court: To normal? [227]

The Witness: To the normal temperature you were operating under at the time you shut down for defrosting.

Q. By Mr. Neave: What is the normal temperature that you were operating under?

A. We were operating under from 10 to 20-minus. There was times that we had instructions to operate at 20-minus, and that would continue until we had further notice that we were allowed to raise the temperature or allow the temperature to rise, or it had to be lowered, depending upon the commodities the government had in storage.

Q. I suppose when you have a room that is full of commodities that are at that temperature, they have a pretty good refrigerating effect of their own, don't they?

A. That is true.

Q. Do you know what the pressures are that are developed inside of the coil with water defrosting?

The Court: With the Recold system?

Mr. Neave: With the water defrosting, the Recold system.

The Witness: A. That would depend largely on the pressure that you started out with. In other words, if you

(Testimony of James R. Payne)

started out with 10 pounds of pressure in the coil and the ammonia was confined in there to where your pressure couldn't escape, why, you would build up to approximately 60 or 70 pounds, I would say.

Q. By Mr. Neave: Doesn't it have a good deal to do with [228] what the temperature of the coil is?

A. Well, the temperature of the coil runs true to form with the temperature of the room.

Q. I don't suppose that is true, though, after you have defrosted? A. Oh, no.

Q. Now, have you any knowledge of what the pressures are in the coils after you have defrosted, before you put the unit in operation? What I want to know is whether you know.

A. That I wouldn't have any way of determining without putting a gauge on, and in the system that I used for defrosting, my pressure would be the same as it would when I was in normal operation, because I never shut the suction line of the unit off. All I did is stop the fans.

Q. Would it be the same, irrespective of what the temperature of the coil was? A. Yes, sir.

Q. Whether the coil was 32 degrees or whether it was 70 degrees?

A. The coil could be 300 degrees.

Q. And the pressure would be the same?

A. The pressure would be the same.

Q. In the coil? A. Yes, sir.

(Testimony of James R. Payne)

Q. I see. [229]

A. Now, I hope there is no misunderstanding here, because the system that I used, 12 coils was in operation while one coil was being defrosted, and the suction line or escape line was always left open. Therefore, your pressure had to be the same.

The Court: They all operated off of one?

The Witness: They all operated off of one header arrangement.

The Court: I see.

Q. By Mr. Neave: Well, suppose in those instances where you had them all off at the same time and you were defrosting them all at the same time, what would be the pressure inside of the coil then?

A. My pressure has registered in the engine room at times when I defrost them all at one time as high as 25 pounds. That is the most that I have ever seen it go, and that was unusual.

Q. Now, have you ever measured the pressures inside of coils which are defrosted by hot gas?

A. Only in the same manner as I have measured the pressure of the Recold blower coils that we are just speaking of. That would be the engine room pressure gauge.

Q. Would that be when all of your units were closed down, that is, all the units that you had under hot gas operation?

A. Well, we are speaking of pipe coils now. [230]

(Testimony of James R. Payne)

Q. All right. Taking pipe coils.

A. You have to shut those down to defrost with hot gas.

Q. That is right.

A. And your pressure is much greater because you are using your discharge of heat pressure and recirculating it through a cold pipe. Therefore, your pressure could be as much as 50 or 60 pounds, because your discharge pressure which you are taking off of is 125 to 175.

Q. Yes. Now, would you consider that 50 or 60 pounds is a critical pressure?      A. No.

Q. How often do you defrost your Recold units?

A. It depends on the volume of merchandise that is stored and the amount of moisture and heat that is taken in with this merchandise. There have been times in taking in steaming merchandise that they would have to be defrosted every day. There is other times I have seen them go for a month without being defrosted.

Mr. Neave: That is all.

The Court: Is that all?      -

Mr. Neave: That is all, Mr. Payne.

Mr. Lewis Lyon: That is all.

The Court: The Witness may be excused?

Mr. Lewis Lyon: The witness may be excused.

(Witness excused.) [231]

Mr. Lewis Lyon: Call Mr: Karl Weber.

## KARL WEBER

called as a witness by and in behalf of the defendant, having been first duly sworn, was examined and testified as follows:

The Clerk: Will you state your name.

The Witness: Karl Weber; K-a-r-l, and one "b" in W-e-b-e-r.

The Clerk: And your address?

The Witness: 5700 Avalon Boulevard, Los Angeles.

The Clerk: Take the stand.

## Direct Examination

By Mr. Lewis Lyon:

Q. What business are you engaged in, Mr. Weber?

A. Manufacturing store equipment and refrigerators.

Q. Is that what the Weber Showcase & Fixture Company does?           A. That is right.

Q. Are you an officer of that company?

A. Yes, sir, president.

Q. How long have you occupied that position?

A. Since 1933.

Q. What is the business of the Weber Showcase & Fixture Company?

A. What is the business?

Q. Yes. [232]

A. Manufacturing complete store equipment, fixtures and refrigerators; mostly refrigerators now.

Q. Before and during the second World War did you take any part in introducing to the armed services a refrigerator for sub-zero holding of foodstuffs using water defrost system?

A. Before the war, is that the question? Did we before the war?

(Testimony of Karl Weber)

Q. Before or during the war? A. Yes.

Q. Did you work in conjunction with any other corporation in introducing that system to the Government?

A. No.

Q. Did you work with any other individual?

A. Yes, I worked with "Hi" Jarvis of Recold.

Q. To what department or branch of the service did you try to introduce that system?

A. I talked generally to all the branches but mostly to the Marine Corps. The Marine Corps was the most active at that time.

Q. Were you subsequently able to obtain an order from the Marine Corps for such units?

A. We did.

Q. Do you recall approximately when?

A. Just a few days after the war started, I think along [233] December. In fact I know it was December. The final consummating order was December 23, 1941.

Q. I hand you, Mr. Weber, a print of a drawing—  
The Clerk: Defendant's Exhibit BB.

(The document referred to was marked Defendant's Exhibit BB for identification.)

By Mr. Lewis Lyon:

Q. —marked Defendant's Exhibit BB for identification, and will ask you if you are familiar with that drawing? A. I am.

Q. And was that drawing used in any way in connection with your introduction of this system to the armed services?

A. No, that wasn't in the introduction, it was after we received the order this is what we put out.

(Testimony of Karl Weber)

Q. This is the sketch of what was put out?

A. Yes.

Q. Who manufactured the box that went to fill that order?

A. You mean this part, the coils?

Q. Who made the box?                      A. We did.

Q. Who made the coils and mechanical equipment?

A. Refrigeration Engineering.

Q. Do you remember, Mr. Weber, the circumstances of your obtaining that order? [234]

A. Very well.

Q. How.

A. I had been working before the war with the Marines and the Army and Navy who all had different ideas as to their refrigerator requirements, and told them that they should standardize on one and have one refrigerator for all the armed services. I got no where with that deal. They had, as I recall—I had made several trips to Washington and the Marines particularly had what I considered a very complicated refrigerating system. I am not a refrigerator engineer but I couldn't understand it because it was full of valves and heat elements and various things of that kind.

We had a man in Washington that I kept telling him—he was there to get business—I kept telling him that we wouldn't care to make the job at all that was because they were too complicated, as we considered ourselves part of the Army and we wanted to offer alternates, which they wouldn't listen to, and then came the war, Pearl Harbor, and a few days later they called me up and they had to have refrigerators, so I told them the only way they could get them from us in the time they needed them—in 20 days



(Testimony of Karl Weber)

in San Diego—was to waive all of their specifications and let us build the refrigerators the way we wanted to build them.

Q. And that was a water defrost refrigerator, including a Recold water defrost unit? [235]

A. That is right.

Q. You say you received this order. Do you recall the date of the reception of that order?

A. December 23, 1941.

Q. How long were you given to complete that order?

A. They told us they wanted them in San Diego crated by January 18th.

Q. Were you able to meet that schedule?

A. We did.

Q. With all 20 of them? A. That is right.

Q. I hand you a photograph marked Defendant's Exhibit M, and will ask you if you recognize that photograph. A. I do.

Q. What does that photograph show?

A. That is the unit we put on those 20 refrigerators.

Q. Including the Refrigeration Engineering Corporation's Recold water defrost?

A. That is right.

Q. Do you know how many similar, or approximately how many similar, refrigerating units were built for the armed services during the war?

A. I have made guesses. I would say in the neighborhood of 50,000 units.

(Testimony of Karl Weber)

Q. Did the Weber Showcase & Fixture Company continue to [236] make those units after this initial order?

A. Some few, not very many. We made some for the Navy after that, just for a small while. After that they bought them direct from the machine manufacturer.

Q. Did you continue to make boxes in any cases?

A. We did, all during the war.

Q. But you were not able to complete the installations in those cases because the units, the refrigeration units, were not purchased from you or from Refrigeration Engineering as far as you know?

A. That is right.

Q. Do you know whether or not, Mr. Weber, in all cases of those approximately 50,000 units that water defrost systems were specified by the Government?

A. I wouldn't know that they were specified. I know that all that I saw after that were water defrost.

Q. And you saw quite a number of them, did you?

A. Yes, I did.

Q. The Weber Showcase & Fixture Company has recently re-purchased some of those units, has it not?

A. That is right.

Q. From the War Surplus Administration?

A. That is right.

Q. And did those include the water defrost system?

A. Water defrost, same thing. They were Carrier units. [237]

Mr. Lewis Lyon: That is all.

The Court: Cross examine?

Mr Neave: No questions.

The Court: You may be excused.

(Witness excused.)

(Testimony of Karl Weber)

The Court: Next witness.

Did you offer BB in evidence?

Mr. Lewis Lyon: I will at this time, if I didn't, your Honor, make the offer of Exhibit BB for identification in evidence.

The Court: Admitted.

Did you have some objection?

Mr. Neave: No, your Honor. I assume it will be identified later as being Refrigeration Engineering Company's product, but I have no objection to it.

The Court: I guess he didn't testify as to the origin of it.

Mr. Lewis Lyon: Of what?

The Court: Of the drawing of Exhibit BB.

Mr. Neave: If counsel will tell me what the fact is, I will stipulate to it.

Mr. Lewis Lyon: The fact is that it was a drawing supplied the Weber Showcase & Fixture Company by Refrigeration Engineering of Los Angeles under the date of December 23, 1941 and was drawn by their engineer, Mr. Kirkwood. [238]

Mr. Neave: Very well.

The Court: So stipulated?

Mr. Neave: So stipulated.

(The document referred to was received in evidence and marked Defendant's Exhibit BB.)

[Note: Defendant's Exhibit BB will be found in the Book of Exhibits at page 1525.]

Mr. Lewis Lyon: Mr. Walling, please.

## C. L. WALLING

called as a witness by and in behalf of the defendant, having been first duly sworn, was examined and testified as follows:

The Clerk: Will you state your name.

The Witness: C. L. Walling.

The Clerk: Your address?

The Witness: 1150 North Western Avenue, Los Angeles.

The Clerk: Take the stand.

## Direct Examination

By Mr. Lewis Lyon:

Q. What is your occupation, Mr. Walling?

A. Refrigeration contractor.

Q. How long have you been in the refrigeration business? A. About 23 years.

Q. What was your occupation or what company were you connected with during the years 1938, 1939, 1940 and 1941? A. York Corporation.

Q. Where? A. Los Angeles. [239]

Q. In what capacity?

A. I started as sales supervisor of the commercial department, and the last four years I was the manager of the commercial department, including sales, engineering and construction.

Q. What is your training in refrigeration engineering?

A. Well, I took a 2-year course in engineering at Siebel Institute of Technology in Chicago, and the 12 weeks' course with the General Refrigeration Company at Beloit, Wisconsin, and a 12 weeks' course supplied by the Vilter Manufacturing Company of Milwaukee, Wis-

(Testimony of C. L. Walling)

consin, and the rest of it is all of the engineering data that was available to the engineering personnel of the General Refrigeration Company, the Vilter Manufacturing Company and the York Corporation and the Kelvinator Corporation, and of course my practical experience in the business since 1923.

Q. Are you acquainted with Mr. "Hi" Jarvis here in the room?           A. Yes, sir.

Q. When did you first meet Mr. Jarvis?

A. Either in late 1935 or early 1936.

Q. When did you first hear of a system of using water for defrosting coils in a sub-zero chamber?

A. The Recold unit was developed about 1938.

Q. When did you first hear of it? [240]

Mr. Neave: I move to have that stricken out as to when the Recold unit was developed. He is not competent to testify about that.

The Court: I understood his answer to be, when the Recold unit was developed that was about 1938.

The Witness: That is right.

The Court: That is what you meant, you heard of it in 1938?

The Witness: I heard of it in 1938; that is right.

Mr. Neave: Very well.

By Mr. Lewis Lyon:

Q. Do you remember the conditions under which you first heard of that unit?

A. I don't recall whether it was a bulletin I received or whether Mr. Jarvis himself told me about the unit. That is, when I first heard of it. I heard it from both sources, but I don't remember which was first.

(Testimony of C. L. Walling)

Q. Do you remember how you received that idea? What did you think of it when it was suggested to you?

Mr. Neave: I object to that, your Honor, as not pertinent, what he thought.

The Court: I think the form of the question is probably improper. You have qualified this witness as an expert and you can ask him what his opinion is now or whether or not he had an opinion at some other time. [241]

Mr. Lewis Lyon: All right. I will reframe the question, your Honor. Thank you.

Q. What was your opinion of such a system when it was first presented to you?

The Court: Did you have any opinion?

The Witness: I had a reaction when I heard of it.

The Court: Did you have an opinion?

The Witness: It was an opinion; yes.

By Mr. Lewis Lyon:

Q. What was that opinion?

A. In my opinion it was just unsound.

Q. Can you state of your own knowledge as to whether a similar opinion was entertained by the other engineers connected with the York organization that you know?

Mr. Neave: I object to that, your Honor, too.

Mr. Lewis Lyon: Whether he can or not, your Honor. It is preliminary.

The Court: Objection overruled.

The Witness: Well, as I recall it—

The Court: Do you know, or can you state?

The Witness: I can't state exactly of a particular discussion with them. I know that there was a number of them but I can't recall a particular one.

(Testimony of C. L. Walling)

By Mr. Lewis Lyon:

Q. Did you form any idea during those discussions as [242] to how they received the idea of the Recold water defrost system?

Mr. Neave: Surely, your Honor, that can't be proper testimony.

The Court: Well, I think that is probably correct. However, in the matter of opinion and prior art, etc., I think he can ask generally.

Mr. Neave: The witness has already stated, your Honor, that he can't specify any specific instance. Now all he can talk about is his general impression about what somebody else had an impression about. It seems to me it is so far away that it hasn't any probative value to be received in evidence.

The Court: I think so. Objection sustained.

By Mr. Lewis Lyon:

Q. Was the system generally discussed when it was first presented?

A. Yes. In our department it was.

Q. Who was there in your department of the York Corporation at that time?

A. You mean to name the individuals?

Q. Yes.

A. That would be hard to name. Myself, Eddie Collins, Don Beck, A. B. Lewis, Milton Van Epps, I believe Tommie Toppan, J. C. Lewis, and then a crew of men in the installa- [243] tion and service department that I can't possibly recall all of their names.

The Court: These were all employees of the York Corporation?



(Testimony of C. L. Walling)

The Witness: Yes, sir.

The Court: I think I will reverse myself on that. I believe it would be admissible. I was thinking generally, but here I had overlooked the fact that these were employees of the York Corporation, the opposite party in this case, and I think whatever statements they had to make are admissible as an admission against interest. Now what admission against interest it will be, I do not know, or what weight should be attached to it, I do not know, but I believe it is admissible for that reason.

Mr. Neave: Well, your Honor, it seems to me if it is going to go in as admissions against interest it has to be something specific with respect to who said it, when, etc.

The Court: I think that an admission against interest is not subject to the hard and fast rule that you have when you are impeaching a witness. In other words, that is, the rule so far as impeachment is concerned.

Mr. Neave: But it has to be sufficiently definite, your Honor.

The Court: Yes, I think it has to be sufficiently definite so that the other side can identify it and find the people and produce them to testify to the contrary.

If a sufficient foundation is laid—I don't think there was a sufficient foundation to permit the admission of the testimony in the present state of the record. [245]

Mr. Lewis Lyon: I don't think there is a specific question calling for a specific answer from the witness that is pending.

The Court: There isn't. I am reversing the ruling I made a few minutes ago. I don't know that he stated the objection, but the answer was inadmissible on the ground that no specific foundation had been laid, and that

(Testimony of C. L. Walling)

is what I wish to have my ruling on, rather than leave it on the ground that it is inadmissible as hearsay.

Mr. Lewis Lyon: I see.

Q. By Mr. Lewis Lyon: Do you recall any specific conversation with any employee of the York Corporation when this idea of the Recold water defrosting was first introduced to you and the York Corporation?

The Court: On or about that time?

Q. By Mr. Lewis Lyon: —on or about that time.

A. Will you read that for me, please?

(The question was read.)

A. I can't recall a specific conversation with a specific individual. I just can't recall it.

Q. Did you ever recommend to any one in the York Corporation that they try to use or install in a system the Recold water defrosting coils?

A. Counseling with the engineering department, I decided not to use them. [246]

Q. Why?

A. For the reason that I have stated before. It was something new to us. It was untried. We did not propose to experiment with it, and without a careful investigation our reaction was that for zero temperatures you just didn't associate water with it, so we would not attempt it. We were going to do those things that we knew were sound, and let the new developments prove themselves before we passed it on to our customers.

Q. At any later date did you actually see such an installation in operation?      A. Yes, sir.

(Testimony of C. L. Walling)

Q. After you saw that installation in operation, did you change your attitude toward the York Corporation utilizing such a system?

A. Well, when I actually had experience with the unit, I was no longer with the York Corporation.

Q. I see. You had discontinued your connection with the York Corporation before, to your knowledge, any use was made of it by the York Corporation?

A. Yes, sir.

Q. When did you sever your connections with the York Corporation?      A. About October, 1941.

Mr. Lewis Lyon: That is all. [247]

The Court: Cross-examine.

### Cross Examination

By Mr. Neave:

Q. Mr. Walling, whom did you work for prior to 1938?      A. Well, I started with York in 1935.

Q. I thought you said 1938?      A. No.

Q. Whom did you work for before 1935?

A. Well, in the order, as near as I can remember, Moser & Suor, Inc., in Kansas City, who were distributors for the Vilter Manufacturing Company and the Norge Corporation.

Q. And what do those companies make? What product?

A. Well, they were distributors of Vilter products and Norge products.

Q. What are those products?

A. Vilter Ice machines, and Norge appliances, radios and domestic refrigerators. However, in my connection I had nothing to do with the radio and appliances depart-

(Testimony of C. L. Walling)

ment. I was the manager of the refrigerating department. And prior to that I was with the General Refrigeration Company, manufacturers of Lipman Refrigeration Machines. When I severed my connections with them I was regional manager in Kansas City, having the Kansas City, the St. Louis office, and the Omaha office. Prior to that I was with the Watt Plumbing, Heating and Supply Company in Tulsa, Oklahoma, and we were distributors [248] for the Kelvinator Corporation and the Lipman at that time, which was later the General Refrigeration Company. That covers my experience.

Q. Now, prior to the time that you knew about the Recold unit, were you familiar with water defrosting units that were used in refrigerating spaces that were above freezing?

A. Water defrosting above freezing?

Q. Yes.

A. No, sir, we didn't use water defrosting above freezing.

Q. You were familiar with brine defrosting?

A. Yes, sir.

Q. And prior to 1936 the York Corporation made and sold refrigerator units that consisted of fin coils and a blower, did they not? A. Prior to 1936?

Q. Yes.

A. Well, prior to 1936 in the commercial department, which I was in, they sold a blower with a York trade name manufactured by the Trenton Radio Works.

Q. But they sold a complete unit?

A. A complete unit, fin coil unit.

Q. A fin coil unit? A. Yes, sir.

The Court: How was that defrosted? [249]

(Testimony of C. L. Walling)

The Witness: In our department, it defrosted automatically, by our selecting equipment large enough to give enough off period to defrost.

The Court: You just shut it off?

The Witness: It would shut off automatically. In other words, out of a 24-hour refrigerating period, we would select machinery that would operate for 16 hours, and each time it would shut off it would defrost, as long as we had refrigeration above freezing temperature, then it would start out with a clean coil.

The Court: What about below freezing?

The Witness: We did not use that type of unit below freezing.

The Court: That is, you did not use the fin and fan below freezing?

The Witness: No, sir.

Q. By Mr. Neave: Are you not familiar with the fact that such units were sold by York for below freezing application?

A. No, I was not familiar with that.

Q. Were you familiar with the fact that such units were sold with brine defrosting?

A. Oh, yes. You mean fin unit?

Q. Yes.

A. They didn't have those available in my department. [250]

Q. But the company did sell them, didn't they, prior to 1937? A. Oh, they no doubt did.

Q. And, also, such units were sold with hot gas defrosting?

A. Yes, they sold them with hot gas defrosting. Oh, I would like to—I recall—I don't know whether it was

(Testimony of C. L. Walling)

prior—no, it wasn't prior to 1936, because I started in with them in 1935, but in about, oh, I don't know whether it was '37 or '38, the records would show that, we sold blower units in an egg breaking and freezing plant here in Los Angeles with fin coils and a blower with below freezing temperature.

The Court: How was that defrosted?

The Witness: Shut down and defrosted.

Q. By Mr. Neave: You stated that, in your opinion, the Recold system of defrosting was unsound. Now, what do you mean by "unsound?" Why unsound?

A. Well, we simply—I clarify that by stating we made no thorough investigation. It was our opinion when it was put on the market. We didn't associate defrosting sub-zero temperature coils with water.

Q. I see. You didn't look into it at all?

A. We didn't look into it, no, sir.

The Court: In other words, your conclusion was that the water would freeze? [251]

The Witness: The water would freeze.

The Court: In sub-zero temperatures?

The Witness: We later found out it was a rather simple thing, but we didn't investigate it.

Q. By Mr. Neave: Who was it that you consulted with in the engineering department when you decided not to recommend its use?

A. Well, I would have to—in the decision at that time, I was not in charge of the engineering department. I don't believe. I would have to look at the record, because when I started with this branch out here in '35 I was only in charge of sales. Mr. Dalin headed our engineering department and Mr. Tuttle headed the installa-



(Testimony of C. L. Walling)

tion and service department. So after we had completed our work of engineering the job and selling, it left our hands and went to the engineering department. Then later in the construction department. But about 1938, and I think prior to 1938, I was given the engineering department and the installation and service department for commercial up to 10 horsepower. Now, it was in our conversations with all of those connected; I would say Dalin, and whoever was in there at that particular time. I can't place the time. I know the responsibility was mine to say that we would use an electric defrost or we would use a water defrost. I had to make the decision, and, of course, I didn't make decisions without discussing it with those people that were [252] doing that portion of the work.

Q. This was after the Recold people brought out their water defrosting unit? A. That's right.

Q. That was before you left?

A. That was before I left.

Q. That was sometime between 1939 and 1941?

A. I can't place the date, the time that the department was turned to me.

Q. All right. Now, what individual did you talk with in the engineering department?

A. It is impossible for me to recall a specific conversation.

Q. And you don't remember the date, any specific date? A. No, sir.

Q. Or any particular person, any specific person?

A. That's right.



(Testimony of C. L. Walling)

Q. What was Mr. Collins', Eddie Collins' position?

A. He was the commercial engineer. To make the picture clear to you, prior to the time that I took the engineering department for commercial, Mr. Dalin was the chief engineer of the branch, and he had an engineer assigned to commercial engineering, which was all the engineering below 10 horsepower, and Mr. Collins was that man. Now, it was Collins—they alternated. It was Collins, and then it was Tom Dixon, and [253] then there was Kenney Blessing. There was about three of them and they alternated on that particular job, and it was their function to approve the engineering from our department on contracts which we made.

Now, of course, the final authority or the final man who would accept it would be Dalin. These were checking engineers. They would check the design. Now, after our departments were separated, then I took Blessing to head the engineering of the commercial department, and then he became responsible to me instead of to Dalin.

Q. I see. Do you know whether or not—

The Court: Will you be through with the witness shortly?

Mr. Neave: I am not quite sure, your Honor. Are you thinking about a recess?

The Court: Yes. I thought if you were going to be through shortly, we could excuse him.

Mr. Neave: I think I will be.

The Court: All right. We will go ahead.

Q. By Mr. Neave: Do you know whether or not prior to 1937 other companies, other than yours, made units that were sold with fin coils and fans?

A. Oh, yes.

(Testimony of C. L. Walling)

Q. Carrier, for instance? A. Yes, sir.

Q. And who else? Vilter? [254]

A. Vilter. I think some of the larger ones. Now, let's see. Prior to 1937?

Q. Well, yes.

A. I don't recall Vilter having any fin coils in their lines, because when we distributed their line in Kansas City we bought our blower units elsewhere. We bought the machinery from Vilter and bought the pipe coil units from Vilter, but we had to purchase fin coil units from other sources of supply.

Q. And you make up units yourself?

A. No, we would make up a complete job. We would buy the high side from Vilter, and we would buy the low side, if it were going to be a blower unit, from an outside source, oh, various ones, depending on which one could fit the application best, and we would install the whole unit.

Q. Prior to the time you came with York you sold these complete units, fin type coil units?

A. Oh, yes.

Q. That was a common unit? A. That's right.

The Court: Did you sell them for sub-zero?

The Witness: No, sir, we didn't use fin coils for sub-zero.

The Court: For sub-freezing?

The Witness: No, sir, we didn't use them for that. [255]

Q. By Mr. Neave: Why not?

A. Because of the defrosting problem. They would just ice up quickly and we hadn't found a way to get it defrosted other than the hot gas defrosting or brine de-

(Testimony of C. L. Walling)

frosting, and in using the fin it made it rather an impractical job.

Q. Don't you know, actually, that there were brine and hot gas defrosting jobs that were sold for use in below freezing?

A. In the larger units. We confined our activities to the smaller ones. We could do it much easier with pipe coils. They were in larger units, and there were brine spray units. We sold some brine spray units, but they would be in chill rooms and in small packing plants.

Q. That was with the fin coils?

A. Some with fin coils, but really usually with pipe coils. They seemed to make a better job.

Q. What did you say your occupation was now?

A. I am in the refrigeration contracting business, my own business.

Q. Your own business. Where is that?

A. 1150 North Western Avenue.

Q. In Los Angeles? A. That's right.

Mr. Neave: May I be excused a minute, your Honor? That is all. [256]

Mr. Lewis Lyon: That is all, Mr. Walling.

The Court: You may be excused. We will have a short recess.

(Short recess.) [257]

Mr. Lewis Lyon: Your Honor, in the original file, in the court's file, there is a stipulation, and which my copy of that says was filed on March 14, 1946. It is a stipulation with respect to the defendant's structures. I have another copy of that stipulation here.

The Court: March 15, 1946?

Mr. Lewis Lyon: March 15, 1946.

The Court: It has exhibits attached to it?

Mr. Lewis Lyon: I would like to offer that stipulation at the present time in evidence, or a copy of it, if the court desires to maintain that in the file, as the defendant's next in order, establishing the fact of the infringement and the infringing structures.

There are two structures identified there and after your Honor has determined which copy he would like to have me introduce in evidence, I will discuss the two different structures.

The Court: Is there any difference in the copies? The exhibits are bad in this one. Are they any better in your copy?

Mr. Lewis Lyon: They are not an awful lot better in this one, your Honor. In fact I think that this is perhaps a copy of photostats that I had to have made off of that one. No, I guess this is another copy that Mr. Neave provided me with. It has his writing. Is that right? [258]

Mr. Neave: Yes.

The Court: The blueprints here are readable; the others are in pretty bad shape.

Whatever you wish, the original stipulation can be introduced in evidence. Did you wish it copied in the record?

Mr. Lewis Lyon: The one I have here is not a signed copy, it is a copy that we made from that.

Mr. Neave: You can compare it.

Mr. Lewis Lyon: I will use this one and it will probably be better to keep that one in the file.

The Court: All right.

The Clerk: CC.

Mr. Neave: I have no objection to it, I only object to Mr. Lyon's characterization of it. He said it established infringement.

The Court: That is the purpose of it.

Mr. Lewis Lyon: The purpose was to establish infringement.

The signatures in the stipulation are typed. I presume there is no objection to that. They may be considered the same as if they were signed.

Mr. Neave: Certainly.

Mr. Lewis Lyon: In that stipulation, your Honor, there are two structures described, one the description of the unit sold to private concerns, the other the description of Government sale of unit V-30. [259]

In this type of case, your Honor, under the statutes, it is not possible for us to maintain an action for infringement because of the sale of the units to the Government so that in our establishment of infringement we will, of necessity, be limited to establishing infringement of the type of structure sold to private concerns. Our only cause of action for the material sold to the Government would be under an action in the Court of Claims, which we have not taken, so that of necessity I will have to confine our comparison and analysis of infringement to the private concern construction.

I don't believe that it is possible to determine in this action the question of whether or not the structures which were sold to the government do or do not infringe the patent in suit. That can only be determined by an action brought in the Court of Claims.

Mr. Neave: That is correct.

The Court: Very well.

Mr. Lewis Lyon: The only purpose therefore that that type of construction can have in this suit is with respect to the allegations of the complaint for declaratory judgment, and cannot enter into the cross-claim at all.

The Court: If the court has jurisdiction to decide the validity of the patent under the declaratory relief act, it certainly will affect the sales that were made to the Government as to whether they did or did not infringe. [260]

Mr. Lewis Lyon: I don't think so.

The Court: The Government is not here.

Mr. Lewis Lyon: There is a particular statute which limits this court's jurisdiction.

The Court: Use by the Government could be introduced in evidence to show use, commercial acceptance.

Mr. Lewis Lyon: But that is all.

The Court: I think that is right.

(The document referred to was received in evidence and marked Defendant's Exhibit CC.)

(The stipulation referred to is, in words and figures as follows, to wit:)

[Note: Defendant's Exhibit CC will be found in the Book of Exhibits at page 1527.]

Mr. Lewis Lyon: Mr. Doble. [267]

WILLIAM A. DOBLE,

called as a witness by and in behalf of the defendant, having been first duly sworn, was examined and testified as follows:

The Clerk: Will you state your name, sir.

The Witness: William A. Doble; D-o-b-l-e.

The Clerk: Your address?

The Witness: 690 Mills Building, San Francisco.

Direct Examination

By Mr. Lewis Lyon:

Q. Mr. Doble, you are a graduate engineer, are you?

A. Well, I am not a graduate engineer in that I didn't graduate from university. I was attending Stanford University, majoring in mechanical engineering, when the first World War broke out, and at that time the Ordnance Department of the United States Army sent representatives to Stanford urging the engineering students to apply for an examination for commission in the Ordnance Department.

I followed their suggestion and was commissioned a First Lieutenant in Ordnance, and I served during the war, and when I returned to the Coast I did not return to Stanford but continued on certain development work and engineering work which I carried on at the same time I was attending university.

Q. Did you follow through with the second World War in the Ordnance Department, Mr. Doble? [268]

A. Yes, sir, I did. I was commissioned a Major and served for three years and eight months and was discharged as a Lieutenant Colonel.



(Testimony of William A. Doble)

Q. Have you ever testified before any of the courts of this district as a patent expert?

A. Yes, sir; many times.

Q. Will you name some of the cases in which you have so testified?

A. I have a list of them here, Mr. Lyon; if you want to save time I could hand those to the reporter.

The Court: Read them.

The Witness: Olive M. Reynolds v Killefer Manufacturing Company.

Roderick Lean Company v Killefer Manufacturing Company.

Six Wheel Corporation v Sterling Motor Truck Company.

Heber F. Towner v Brenneis Manufacturing Company.

Dinuba Steel Products Corporation v Killefer Manufacturing Company.

George D. Parker and Charles E. Evans v A. Fox.

Handy Roll Company v Dennison Manufacturing Company.

William Cords v Coil Manufacturing Company.

James H. Chambers v Roeding Fig & Olive Company.

John C. Creagmile and Bear Manufacturing Company v John Bean Manufacturing Company.

Shick Dry Shaver, Inc. v Nicholl, Inc. [269]

Super Mold Corporation v Barrett Tire Company, Ltd.

Super Mold Corporation v Thomas F. Bacon.

Bacon Vulcanizer Manufacturing Company v Super Mold Corporation.

The Independent Register Company v Charles Wheeler.

(Testimony of William A. Doble)

Patterson-Ballagh v Rubber Sleeve, et al.

Roads Construction Company v Standard Steel Works.

Doble Laboratories v Thomas Day Company.

W. C. Phillips and Fred J. Day, Jr. v Frank Fernandez.

Northill Company, Inc. v R. S. Danforth.

William Josephian v Stuart Oxygen Company, Ltd.

By Mr. Lewis Lyon:

Q. Have you ever personally done any work in connection with the problem of defrosting refrigerator coils?

A. I have done it in this connection. Having trouble with the defrosting of coils in the apartment house in which I was temporarily living in Los Angeles, I conceived the idea and received a patent on an electric form of defrosting.

Q. In conjunction with your preparation to testify in this case, have you inspected any of the form and devices here identified as the Recold fin type coil manufactured by Refrigeration Engineering?

A. Yes, sir.

Q. Have you seen any of those devices in operation?

A. Yes, sir. [270]

Q. Have you studied their operation?

A. Yes, sir.

Q. Do you understand them?

A. Yes, sir.

Q. Have you made a study of the McAdam patent in suit?

A. Yes, sir.

Q. And the art which has been cited against that patent in the answer of the plaintiff to the cross-complaint?

A. Yes, sir.

(Testimony of William A. Doble)

Q. Have you made any study and comparison of the structure of the McAdam patent with the structure as manufactured and sold by the plaintiff to private concerns, as the same is illustrated in the stipulation, Defendant's Exhibit CC? A. Yes, sir; I have.

Q. Have you prepared any charts illustrating the two structures? A. Yes, sir.

Q. I have here a chart entitled "Infringement Chart," was that prepared by you and under your supervision, Mr. Doble? A. Yes, it was.

Mr. Lewis Lyon: For the purpose of illustrating the witness' testimony I will offer at this time the Infringement Chart as Defendant's Exhibit next in order. [271]

The Court: Is that the same as those on the board?

Mr. Lewis Lyon: To a considerable degree, yes, your Honor, in a small form and more convenient for the parties to use.

The Court: It is the same thing only smaller?

Mr. Lewis Lyon: It is the same thing only smaller.

The Court: Very well. That will be marked DD.

(The document referred to was marked Defendant's Exhibit DD for identification.)

Mr. Lewis Lyon: In other words, it breaks down an analysis of the patent in suit contained on Exhibit DD which is not on the board at the present time.

The Clerk: These are not in evidence yet, your Honor?

The Court: No, they are just marked for identification presently.

You are not offering them in evidence now, are you?

(Testimony of William A. Doble)

Mr. Lewis Lyon: I offer them for the purpose of illustrating his testimony. I can reserve the offer until after the testimony is in.

The Court: I think they ought to be marked for identification now until they are identified.

By Mr. Lewis Lyon:

Q. In Exhibit DD for identification, Mr. Doble, you have included a series of drawings marked respectively "Defendant's Structure, Normal Operation," compared with [272] "Plaintiff's Structure, Normal Operation"; "Defendant's Structure, Defrosting Operation," "Plaintiff's Structure, Defrosting Operation"; "Defendant's Structure, Drainage Operation," "Plaintiff's Structure, Drainage Operation." Those drawings were prepared by you from what?

A. Those drawings were prepared by me from the drawings in the McAdam patent, Defendant's Exhibit A, and from the description and blueprints contained in the stipulation setting forth plaintiff's structure.

Q. That is plaintiff's commercial structure?

A. Yes, sir.

Q. And those are, you state, an accurate representation of both structures?

A. They are a pictorial representation. Some of the dimensions have been enlarged or exaggerated so that we could properly bring out the colored differences of the different parts of the mechanism, but as far as the operation would be concerned, they are true representations of the patent and the stipulation of plaintiff's commercial structure.

(Testimony of William A. Doble)

Mr. Lewis Lyon: I do not know at this time whether the court deems it necessary to have this witness explain completely the structure of the patent in suit which he is prepared to do—

The Court: I think I understand the patent in suit, although I do not think that I would be able to read the [273] claims of the patent and understand that that is what he is talking about.

Mr. Lewis Lyon: I think then maybe I had better have the witness explain the patent in suit and explain his application of the claim, both to the plaintiff and the defendant's structure.

Q. Can you do that at the same time, Mr. Doble?

A. Yes, I think that would be a good way to handle it, Mr. Lyon. It would shorten the proceedings.

The Court: Because while I might understand the structure as it works, it may be that you do not claim it.

Mr. Lewis Lyon: That is right. It might possibly be.

Q. Will you proceed with that explanation, Mr. Doble?

A. Your Honor, may I step down so that I can use these drawings?

The Court: Yes. Do you have a copy of the patent?

The Witness: Yes, I have a copy of the patent here.

The Court: All right.

The Witness: I have now placed on the easel Claim 13 of the McAdam patent, Defendant's Exhibit A, which more definitely includes all of the elements of the invention. As there has been a great deal of discussion as to the invention, I will make my description of it rather short, and will follow generally the terms of Claim 13. [274]

(Testimony of William A. Doble)

Can the defendants see all right? Would it be better if I stood over on this side?

Mr. Reave: Yes, I think it would.

The Witness: Claim 13 first specifies or calls for: in combination with the refrigerated space.

The Court: Claim 13? This one I have here says Claim 1.

The Witness: Well, if your Honor will turn to the back of that, you will find claim 13. That is identical to the claim I have now placed on the easel.

The Court: Oh, I see.

The Witness: Claim 13 reads, "in combination with a refrigerated space."

Now, if we will consider the chart which is entitled, "Defendant's Structure Normal Operation," I will point out that refrigerated space. It includes, in part, the ceiling, side wall and base of a heavily insulated room, within which I have shown the refrigerated atmosphere as rather a clouded-like blue coloring, so as to bring out that within that space you have a circulation of air, and under a particular condition, namely, that the condition of that refrigerated space is sub-freezing, that is, below the freezing temperature of water.

Q. By Mr. Lewis Lyon: Yes, for example, what temperature? As you have specified it on the chart?

A. On the chart I have specified a minus-20 degrees, [275] which is 52 degrees below the freezing temperature of water.

The Court: The specification there is No. 10?

The Witness: The specification is No. 10, your Honor, and is so designated in that chart.

The Court: And in the patent?



(Testimony of William A. Doble)

The Witness: And so designated in the patent.

The Court: These numbers you use throughout are the same numbers used in the patent?

The Witness: Yes, your Honor. So one of the important things to start with, as Mr. McAdam sets forth in the first two paragraphs in his patent, is that his invention is directed to a defrosting mechanism mounted within a refrigerated space, which is maintained at all times below the freezing temperature of water.

So we have on the chart the refrigerated space 10 confined by the ceiling, wall, and the base of the room. I have illustrated in that room by a keg and four boxes to indicate that within that refrigerated space there is produce or articles to be refrigerated. Now, the McAdam patent next calls for—

The Court: Barrels,—they don't freeze whiskey, do they?

Mr. Lewis Lyon: Not generally, your Honor. I hope not.

The Witness: Your Honor, I don't know what is in that barrel. I just drew it.

The Court: Oh, it is just commodities? [276]

The Witness: Yes, sir.

Q. By Mr. Lewis Lyon: It looks a little like a whiskey barrel, your Honor. I don't know why he drew it.

The Witness: In my original sketch I had a bung hole in it, but the draftsman left it out, which made a difference.

So, in that refrigerated space the McAdam patent calls for, in the first element, a coil to be periodically defrosted. Now, that coil is indicated in the defendant's structure, as shown on the chart "Normal Operation," as a series of



(Testimony of William A. Doble)

circles with a hole in the center, representing a pipe, and a square member around that pipe, which is to indicate the fin on the pipe. That coil in the patent is designated by the reference character "5."

The Court: And throughout these diagrams?

The Witness: Throughout these diagrams, your Honor. So we have located within that sub-freezing space the refrigerating coil. In the same way, referring to plaintiff's Structure, the chart of "Plaintiff's Structure Normal Operation," we have a refrigerated space also, which I have designated by the numeral 10, and have colored with the same cloudy effect of light blue, to indicate that that space is maintained at 20 degrees below zero, which is 52 degrees below the freezing temperature of water. And located within that space we find a comparable set of refrigerator coils, which I have indicated on the chart entitled, "Plaintiff's Structure Normal Operation" [277] as circles in dark green, with a white center, representing the pipe, and a lighter green squared box structure surrounding the pipe, which represents the fins. So that we find in defendant's structure and in plaintiff's structure, in combination with the refrigerated space, the refrigerating coil 5.

The Court: That is on all the diagrams?

The Witness: That is on all the diagrams, the direct comparison between each.

Q. By Mr. Lewis Lyon: Is the identity of the structure and function shown?

A. Yes, there is a substantial identity of structure and function and result obtained by those two.

(Testimony of William A. Doble)

The next element calls for a spray-head positioned to distribute water over said coil for defrosting thereof.

The Court: That is 14 in the Defendant's Structure?

The Witness: Yes, and 14 on all of the charts.

The Court: Except in the Defendant's Structure they have kind of a pan affair?

The Witness: It is a pipe, your Honor. It is a series of pipes across the top.

The Court: In the Defendant's Structure it is a pan?

The Witness: It is a pan.

The Court: And in the plaintiff's is a pipe?

The Witness: They are both pipes but one is in a little [278] different form, that is all. In each of the charts I have shown the spray-head colored a rather bright red, and have indicated on each chart by the character "14 Spray Head" and the small "red" under it the part that represents the spray-head. That is true on Defendant's Structure. It is likewise true on Plaintiff's Structure.

Q. By Mr. Lewis Lyon: Now, Mr. Doble, the numbers you have used on the claim charts, how do they compare with the numbers on the structure charts?

A. The numbers on the claim charts correspond with the numbers and colors which appear on the illustrated charts.

The next element on claim 13 calls for—this is the third element—a fan, which I have indicated in all of the charts and by the character number "6" which is the same number as given in the patent, and have colored the fan a brown. The third element reads: "A fan '6' to move air of said space over said coil adapted to be discontinued during defrosting periods, whereby the air of said space does not

(Testimony of William A. Doble)

rise above the freezing point of water during the defrosting period."

The fan, or the normal function of any fan is to blow air, and is located in Defendant's device that it blows the air across the refrigerating coils, the green refrigerating oils into the refrigerated space, and the air which is blown by the fan is likewise drawn from that space so that [279] there is a recirculation of air contained within the refrigerated space.

In the same way in plaintiff's commercial structure, as shown on the charts, the fan is colored brown and indicated by the character "6." A different type of fan is used. It is used as a Sirocco type of fan, but it performs the same type of function, of blowing the air from the coil into the space.

The Court: Where does the air come out there?

The Witness: It comes out of the top pipe, the top brown pipe that sticks out of the metal case of the unit.

The Court: Oh, that is encased in a solid metal case?

The Witness: Yes.

The Court: And the fan sucks the air up and blows it out the top?

The Witness: Yes.

The Court: Or where does it take the air in?

The Witness: It takes the air in at the bottom, through the opening in the bottom of the case and the top of the drip pan. So that the circulation there in Plaintiff's commercial structure is to suck the air from the refrigerated space up through and across the green refrigerating coils into the brown fan and out the brown pipe at the top of the casing, returning that refrigerated air to the refrigerated space.

(Testimony of William A. Doble)

The Court: Plaintiff's fan sucks and the defendant's fan [280] blows?

The Witness: That is right, your Honor. They both perform the same operation for the same function and accomplish the same result.

The fourth element includes a drip pan disposed beneath said coil to receive water and ice gravitating from said coil. Referring to Defendant's structure, the chart of Defendant's Structure, in each of these charts the drip pan is indicated by the character "8" with the words "Drip Pan" after it and the letter "red" with a cross directly below, indicating that the coloring of the drip pan is indicated by red crosses. The same is true in each of the charts. In plaintiff's chart I have likewise shown the drip pan with red crosses and have indicated the drip pan with the character "8" and the words "drip pan" after it, with the wording below "red" with an "X".

Q. By Mr. Lewis Lyon: Mr. Doble, going back just a minute to the third element of the claim, was the fan "6" in either the Defendant's or Plaintiff's structures adapted to be shut off during the defrosting period?

A. Yes, they both are.

Q. They both are exactly the same in that respect?

A. They are both the same in that respect.

The Court: Go ahead.

The Witness: The fifth element calls for a self-draining [281] conduit "12" leading from said drip pan to points remote from said space. I have colored the conduit "17," which leads from the drip pan "8" with an orange cross, and a designated—

(Testimony of William A. Doble)

Q. By Mr. Lewis Lyon: That should be "12", shouldn't it, Mr. Doble? You said "17." Isn't that number "12"? A. Excuse me. I meant "12."

The Court: 12. You are reading No. 5 now?

The Witness: Yes, I am reading 5. Reading 5, it is "A self-draining conduit '12' leading from said drip pan to points remote from said space." Connected to the drip pan, which is shown with the red crosses, is a red conduit which is colored with orange crosses and has the designation "12 Drain Conduit," and that leads from the drip pan through the insulating walls, so that it conveys the products of the defrosting operation outside and away from the refrigerated space, and is so inclined and sloped so that a rapid draining of that water takes place, so that at no time does this water accumulate sufficiently long so that it would freeze and block up the passageways, even though the temperature of the refrigerated space is maintained some 50 degrees below the freezing temperature of water. So we have the drip pan and the drain, and the drain conveys whatever water is received by the drip pan outside the refrigerated space. That is very important, of course.

In Plaintiff's commercial structure, as shown on the [282] charts, connected to the spout from the drip pan is a conduit which I have indicated with an arrow and the numeral "12" and the words "Drain Conduit" and below that "Orange X."

The Court: Is there any significance to these fitting in, or does that indicate the extent of the space?

The Witness: No, that is mechanical. You mean the connections of the two parts?

The Court: Yes.

(Testimony of William A. Doble)

The Witness: Well, as the conduit goes through the insulated wall in Plaintiff's Structure they use a rubber hose, and the rubber hose is slipped over the red "X" part of the drip pan spout. It is just a matter of making it convenient.

The Court: That is in the Plaintiff's?

The Witness: In the Plaintiff's, yes, sir. I have a terrible time keeping the two separate.

The Court: Well, call them "York" and "Recold."

The Witness: I think that would be better, your Honor. Thank you. In York the conduit "12" as it passes through the side wall of the refrigerated space is a rubber hose which at the inner end is slipped over the spout or the drain portion of the conduit from the drip pan and carries out to a conduit or duct, which carries the products of defrosting to the place of disposal.

So, therefore, we find in the York structure a drip pan with a conduit, and it will be noted that the conduit is [283] inclined so as to rapidly drain.

The Court: So that it is self-draining?

The Witness: So that it will be self-draining, your Honor.

Returning now to the claim chart and reading element 6: "And an inclined water supply conduit (17)" which I have colored on the charts in each case with the color orange, "leading from a point remote from said space to said spray-head; said water supply conduit at said remote point provided with an opening normally open to the atmosphere whereby the conduit and spray-head respectively are self-draining."

Referring to the Recold unit, the chart of the Recold unit, it will be observed that the spout from the red spray-



(Testimony of William A. Doble)

head (14) is connected by a conduit (17), which is so designated on the chart by an arrow and the numeral 17 and word "Conduit" and under the word "Conduit" the color is designated as orange. That conduit is colored orange and indicates an open passage from the spray-head, which is so inclined as to be self-draining down to a 3-way valve.

The seventh element of claim 13 calls for: "And means (18) for periodically supplying water to said supply conduit during period when said fan is inoperative."

As we mentioned a few moments ago, during the defrosting operation the fan is shut off, that is, the brown fan indicated by the numeral "6." The valve in the Recold unit is indicated [284] by two colors. The housing of the valve is indicated as purple and includes in that a valve element which is colored yellow. The valve is shown in the Recold chart entitled, "Normal Operation" as closed to the supply of water. [285]

You will notice the upper part of the purple valve housing is connected with a pink conduit which is connected to the normal supply line of the installation in which the unit is mounted.

Q. By Mr. Lewis Lyon: Is that tap water?

A. That is ordinary tap water.

As shown in that chart, no water would flow into the spray-head.

In the York structure, the spray head—

The Court: As shown in the defrosting operation in your first chart, no water flows in to the spray-head?

The Witness: That is not in the defrosting, your Honor, that is in the normal operation when it is not defrosting, when it is cooling.

The Court: I see.



(Testimony of William A. Doble)

The Witness: There is no water flowing in there. It is a closed conduit.

The Court: I was looking at the wrong chart.

The Witness: In the York structure the series of spray pipes or spray-heads which are indicated in red are connected to the orange drain and supply conduit 17, and which in turn is connected to the upper end of a purple valve body which is known as the three-way valve.

As shown in the chart entitled "Normal Operation" the valve is open to drain so that any water that may accumulate [286] in the passageways, including the spray-head, the conduit, may freely drain out of the refrigerated space and to the point of disposal.

The Court: Before you get off of 17 and 14, spray-head what is it in York's structure that is that bulge?

The Witness: That is a pipe that runs across. There are a number of spray-heads which are each connected to that pipe that runs across.

The Court: I see.

The Witness: And there is a single pipe from that cross header which is connected to the valve and normally open to drain.

The Court: It comes up in one pipe and goes across into several heads?

The Witness: That is right, your Honor.

The Court: And then comes down that same drain pipe?

The Witness: Yes, your Honor. And in the same way—

The Court: It uses a pan?

The Witness: The same way that York uses a series of tubes and a conduit which is self-draining, the patent

(Testimony of William A. Doble)

uses a pan with the tubes and the valve is closed to the water but open to drain so that at all times that system is so open that water cannot accumulate there during its normal operation.

We might compare the charts entitled "Normal Operation" now to the charts entitled "Defrosting Operation," one for [287] the Recold and one for the York.

In the Recold chart entitled "Defrosting Operation" we will observe that there is a change. The yellow valve member confined in the purple valve body has moved down to close the opening to the vent, so that no longer can the spray-head and the supply conduit 17 drain.

The upper valve seat has been uncovered admitting the ordinary tap water to flow through the valve, through the conduit 17, up to the pan and to spray through the holes or openings, which are 15 in the patent, down across the coils, and you can see the drops dropping down through the coils, and as the water contacts the frost it melts the frost and washes it from the coils, it accumulates in the lower pan and the melted frost and the spray water or defrosting water drains out of the conduit 12 to a point outside of the refrigerated space before it has a chance to freeze.

The Court: Is there no different refrigeration coil? Is that encased in a solid housing such as the York?

The Witness: No, your Honor, only the sides.

The Court: Which sides? All sides?

The Witness: The front is open.

The Court: That is open?

The Witness: That is open.

The Court: And the back is open?

(Testimony of William A. Doble)

The Witness: The back is open where the fan is located. [288] That side is open, so that the air can flow through.

The Court: And the top is open and the bottom is open, so that the water can go through.

The Witness: But the top, you might say, is covered by the pan 14.

The Court: And the bottom by the pan 8.

The Witness: The bottom by the pan 8, and then there are sides that connect the pan 14 to the pan 8.

The Court: On the ends.

The Witness: On the ends; yes, your Honor.

The Court: All right.

Q. By Mr. Lewis Lyon: Mr. Doble, I hand you a photograph that shows a Recold unit. Can you explain that structure fully from that photograph?

A. Yes, I can.

The Recold unit includes the coils with fins which are mounted within a casing, the back of which is open and the front of which is open, so that the air can be blown by the fan through the coil section into the refrigerated space.

Mr. Lewis Lyon: I think it might be well to have that marked for identification so that the record will be clear.

The Court: These fins are solid, are they?

The Witness: They are pressed metal.

The Court: Pressed metal around the pipe?

The Witness: Around the pipe. They are sheet metal [289] pressed.

The Court: How far apart are they?

The witness: That would depend on the size of the coils. Some of them about a quarter of an inch apart, some more or less.

The Clerk: Defendant's Exhibit EE.

(The document referred to was marked as Defendant's Exhibit EE, for identification.)

(Testimony of William A. Doble)

The Witness: So that in the Recold unit we have the ordinary tap water flowing through the valve up to the spray-head through the coils, dripping down to the drip pan, where it is accumulated snow or ice which it has melted from the coils, and all of that water or liquid is carried out of the refrigerated space by the drain conduit 12.

It will be observed that the valve is also maintained outside of the refrigerated space.

In the York structure the valve is a manually-operated valve, whereas in the Recold it is electrically operated, but that makes no difference in the operation of the structure.

The Court: You mean that is shown here as manually operated?

The Witness: Yes.

Mr. Neave: Your Honor, we may be getting into some confusion in nomenclature by calling that Recold. Perhaps it might better be called the patented structure because, as I [290] understand it, actually the Recold structure doesn't have an electrically operated valve.

The Court: Whatever it is, let us keep on calling it Recold. We have changed its name once.

Mr. Neave: Very well. Then we will bring it out later.

The Court: Yes.

The Witness: Comparing the chart of the York structure, the one entitled "Normal Operation" as against the one entitled "Defrosting Operation" it will be noted that the valve handle has been swung from the upper position to a lower position.

The Court: It is open .

The Witness: Pardon me?

The Court: It is open.

(Testimony of William A. Doble)

The Witness: It is open; yes, your Honor; so that the water will flow up to the spray-head and the water is indicated flowing up there by broken lines and the water spraying out of the holes in the spray-head down across the coils picking up the frost and ice, depositing it in the drip pan and there the water is indicated being withdrawn from the refrigerated space and drained off to the sewer or other place of disposal.

I think it is very simple.

The last series of charts illustrate the Recold in the drainage operation. [291]

The Court: And the other one, they both do the same, they shut the valve off.

The Witness: They both shut the valve off and the process is reversed. The water that was in the drip pan, some of it you can see is still dripping down, the balance of it is being withdrawn from that solid refrigerated space so it would not freeze, and is allowed to pass through the 3 way valve down to the drain. The same water that drips off the coils passes through the conduit outside of the refrigerated space and to a place of disposal so that it will not freeze, keeping the system clear and ready for the next defrosting operation when necessary.

The same way with York. As illustrated in the chart, the chart entitled "Drainage Operation," the water is shown, a little of it, dripping off the spray-head, the balance of it returning through the conduit 17 down through the valve to the drain and to the sewer, and such water as is still dripping from the coils and is confined to the drip pan is being withdrawn through the conduit 12 outside the refrigerated space to the drain, so that the same operation we have in both the Recold and the York in immediately

(Testimony of William A. Doble)

withdrawing what remains of the liquid water in the system after a defrosting operation. They both have substantially identical structures, operated by substantially identical mode of operation, and they both produce identically the same result. [292]

Q. By Mr. Lewis Lyon: Mr Doble, in the claim chart introduced in Exhibit DD, you have analyzed claims 1, 2, 5, 6, 7, 8, 12 and 13 as being representative of the claims of the patent in suit, is that correct?

A. That is correct, Mr. Lyon.

Q. And in each of those breakdowns of the claims you have utilized numbers and colors. How do those compare with the numbers and colors of claim 13 which you have just specifically referred to?

A. They are the same. I have used the same system of colors and the same system of numbering throughout. The numbers are taken from the patent, and I have selected the colors for common use throughout. That is, each element that corresponds has been colored the same.

Q. And these numbers that you use, are they or are they not the numbers of the specification of the patent in suit? A. Yes, sir.

The Court: What do you mean here on that first page, on your claim 5 (3a), "Said means (18)"? That is the valve isn't it?

The Witness: Yes.

The Court: "Operates to finally draw air through said conduit 17." You mean it drains the water out?

The Witness: Yes, your Honor. I will point that out.



(Testimony of William A. Doble)

The Court: Is that the patentee's way for saying you [293] drain the water out, that the air must follow?

The Witness: That is about it. And it has one other effect, your Honor, in that as it pulls air in through these holes, it would tend to pick up any drops and carry them out.

The Court: You mean as it automatically drains?

The Witness: Yes, your Honor. It pulls the air in and pulls with it such drops as may be hanging in the openings so as to free the openings so they won't freeze up.

The Court: I see.

Q. By Mr. Lewis Lyon: In this claim chart, I note claim 2 says, "Adds to claim 1 (4) a drip pan (8) for said coil," and "(5) and a self-draining conduit (12) leading from said drip pan to points external to said space." What do you mean by that analysis there, Mr. Doble, adds to claim 1?

The Court: You mean everything he says in claim 1 plus this?

The Witness: That is right.

The Court: In claim 1 he is claiming the introduction of the water and in claim 2 he claims the introduction of the water in combination with the taking of the water out.

Mr. Lewis Lyon: That is what I wanted to make clear to your Honor.

Q. Is the analysis as you made of claim 13 in your statement that the York structure includes each element



(Testimony of William A. Doble)

operated in the same way to produce the same result and [294] whether a substantial identity of structure follows through with the rest of the claims that you have analyzed in the claim chart as compared with the patent in suit?

A. Yes, sir; that is true.

The Court: In other words, claims 1, 2, 5, 6, 7 and 8—

The Witness: 12 and 13.

The Court: And 12, are all put together in one combination in 13.

The Witness: Well, yes, your Honor. They are in different language, and fixes the combination up a little differently to broaden out the scope of his invention.

The Court: What do you mean, 13 is a different combination than all of the others?

The Witness: It is a different combination than claim 1, for example, which does not include the drip pan. You see, that is why I took claim 13.

The Court: What you mean is that 13 has everything that is in the claims that you have recited.

The Witness: Yes, your Honor.

The Court: What did you do with the other claims, claims 3 and 4, 9, 10 and 11?

The Witness: Claim 1, your Honor, includes a different combination. Now, somebody might thinkably use just those elements—there are only three of them—as set forth

(Testimony of William A. Doble)

in claim 1 and not use the drip pan and therefore try to avoid [295] infringement, so that in order to protect the inventor, not only does he have claim 1 but he has claim 13.

The Court: I am talking about 4.

The Witness: Claim 2, you see, adds to claim 1.

The Court: I am talking about 3 and 4 now: "The combination as in claim 1 and in which said conduit has a relatively low specific heat.

"The combination as in claim 1 and further including a drip pan for said coil and a self-draining conduit leading from said drip pan to points external to said space and having relatively low specific heat."

The Witness: Claim 3 is not included in my analysis. That brings in an entirely different element.

The Court: All right. Go ahead. Are you going to be through shortly with the direct examination?

Mr. Lyon: I anticipate I will; yes, your Honor.

The Court: Even if you get through you will come back tomorrow and say, there is just one thing more that I forgot.

Mr. Lewis Lyon: That might be true.

The Court: So I think we better recess now until 10:00 o'clock in the morning.

(Whereupon, at 4:35 o'clock p. m., September 18, 1946, an adjournment was taken until 10:00 o'clock a. m., Thursday, September 19, 1946.) [296]

Los Angeles, California; September 19, 1946; 10:00 o'clock a. m.

The Court: Ex parte?

The Clerk: No ex parte, your Honor.

The Court: Proceed in the York case.

Mr. Lewis Lyon: I wonder if your Honor has determined whether or not you will make the inspection as suggested?

The Court: Did you find a brine plant?

Mr. Neave: There is a brine plant that is a continuous brine spray here in Los Angeles. It is going all the time so that no frost forms, and it is going for the purpose of no frost ever forming on it. If you want to see the action of the frost formation, we will stop it until the frost forms before we get there and then start the brine and it will defrost it.

Mr. Lewis Lyon: That is an entirely different system.

Mr. Neave: It may be, but there doesn't happen to be one of those units here in Los Angeles.

The Court: I do not think it will be necessary for me to see a plant in operation.

Mr. Lewis Lyon: Anticipating that that might be your Honor's decision at this stage of the case, I have brought in a small unit so that if there are any points in the construction that your Honor has in mind the actual structure is here for observation. [300]

The Court: Very well.

Yesterday there was a witness here from Santa Rosa. What was his name, Payne?

Mr. Lewis Lyon: Yes.

The Court: Is he still here?

Mr. Lewis Lyon: No, sir. He is not. He went back last night.

The Court: I wanted to ask him some more questions.

What I had in mind was—I don't know whether the parties can stipulate or not—he said that he had three units there with the pipe construction.

Mr. Lewis Lyon: That is right.

The Court: And a crew of men working 24 hours a day, that he defrosted them by going in and scraping the ice off. I wanted to know how long it took.

Mr. Lewis Lyon: It is continuous, your Honor, with those three. According to his testimony it was continuous, that crew of men were working continually in those plants at all times.

The Court: But they weren't working 24 hours a day in each one?

Mr. Lewis Lyon: That is the way I understood it.

Mr. Neave: I don't think he stated that, your Honor. I didn't so understand it.

Mr. Lewis Lyon: They inform me that my interpretation [301] is incorrect; that there is a crew working in the three plants continuously.

The Court: I wanted to know how long it takes to scrape the ice off of one plant, which he said he could defrost with this plant in seven minutes.

Mr. Lewis Lyon: The only answer I could give would be that it would be a third of the total time, your Honor.

The Court: All right. Go ahead.

Mr. Lewis Lyon: At this time, your Honor, I would like to ask premission of the court to interrupt the testimony of Mr. Doble to put on two other short fact witnesses.

The Court: Very well.

Mr. Lewis Lyon: Mr. Johnston.

ELLWOOD B. JOHNSTON,

called as a witness by and in behalf of the defendant, having been first duly sworn, was examined and testified as follows:

The Clerk: Will you state your name.

The Witness: Ellwood B. Johnston.

The Court: J-o-h-n-s-t-o-n?

The Witness: Yes, sir.

The Clerk: Your address?

The Witness: 3890 Edgehill Drive.

The Clerk: Los Angeles?

The Witness: Los Angeles.

The Clerk: Take the stand. [302]

Direct Examination

By Mr. Lewis Lyon:

Q. What is your business, Mr. Johnston?

A. I am in the baking business, wholesale pie business.

Q. What is the name of the concern?

A. Johnston Pie Company.

Q. Are you an officer of that company? A. I am.

Q. What officer?

A. Well, it is a partnership. I am a partner.

Q. You are one of the partners? A. Yes.

Q. In conjunction with the operation of your business, do you operate a below freezing box of any kind, or room?

A. We operate a freezing box.

Q. What temperature is that freezing box

A. Zero.

Q. Zero degrees Fahrenheit? A. Yes.

Q. How long have you had that box in operation?

A. Since 1939.

(Testimony of Ellwood B. Johnston)

Q. What type of heat exchanger is used in that room?

A. You mean freezing unit?

Q. Yes.

A. One just like that one over there, only bigger. [303]

Mr. Lewis Lyon: The witness referred to the Recold unit sitting on the desk, for the purposes of the record.

Q. Have those units been in continuous operation in that room since 1939? A. They have.

Q. Have they caused any trouble in operation?

A. None whatsoever.

Q. How did that compare with other types of refrigeration that you may have used?

A. It is the best that we ever had.

The Court: What is its advantage over others? You say it is the best. Why is it the best?

The Witness: The only thing I know about it is that we get it defrosted a lot quicker. We don't have to shut the room off. It defrosts a lot quicker.

The Court: How long does it take to defrost?

The Witness: I don't know an awful lot about that machine except my men tell me it only takes about six minutes to run that water through there and defrost it.

The Court: You do not lose the temperature of the room?

The Witness: You don't lose the temperature of the room.

The Court: Do you have to move your material out?

The Witness: No, we don't move anything. We defrost it every morning. Every morning a man has a regular job of [304] defrosting that. And it is just about the most practical one that we ever had, that is all.

(Testimony of Ellwood B. Johnston)

By Mr. Lewis Lyon:

Q. Before the use of this type of freezing unit, had the Johnston Pie Company used other types of construction?

A. We did.

Q. What type was that?

A. We had a Kelvinator and we had a York ammonia machine.

Q. What kind of heat exchanger was used in the rooms with those installations?

A. I don't know what you call it, a lot of coils, great big coils.

Q. Exposed pipe? A. Yes.

Q. Do you know what method of defrosting is used in conjunction with that prior equipment?

A. Well, we had to shut the ice-box off and let it defrost. It just took a lot longer, that is all.

Q. You just shut the refrigeration off and let the air defrost it, is that right?

A. Yes, either that or we chopped it off.

Q. Did you have to take the merchandise out of the room in conjunction with that operation?

A. I believe we did. It has been so long ago, I [305] don't really remember.

Q. Do you recall the circumstances leading up to the installation of this Recold water defrost system in that box at the Johnston Pie Company?

A. There was a fellow that was building a box—I forget his name—and he recommended this outfit to me,



(Testimony of Ellwood B. Johnston)

and then this Mr. Kirkwood came around and he told us about it and took me down and showed me the coils and it looked like it was a pretty good idea so I thought I would try it out.

Q. In conjunction with that installation, did you extract any guarantee from Mr. Kirkwood or the Refrigeration Engineering?

A. I think they gave us a six months' or a year's guarantee. I don't remember for sure.

Q. You don't remmeber that particular instance?

A. No.

Mr. Lewis Lyon: That is all.

The Court: Cross examine.

#### Cross Examination

By Mr. Neave:

Q. Mr. Johnston, before you bought this Recold unit, had you ever used in your plant a blower unit type of refrigerator? A. No.

Q. The only thing you had ever used was a pipe type [306] where the pipes were around the room?

A. Yes. Then we had a Kelvinator, and I don't know what coils they had on that. I don't remember.

Q. And you have had no experience with any other type of blower unit than the Recold?

A. No, not in my plant.

Mr. Neave: That is all.

The Court: This witness may be excused?

Mr. Lewis Lyon: That is all, Mr. Johnston.

(Witness excused.)

Mr. Lewis Lyon: Mr. Tuttle.

WILLIAM R. TUTTLE,

called as a witness by and in behalf of the defendant, having been first duly sworn, was examined and testified as follows:

The Clerk: Your name, sir?

The Witness: William R. Tuttle.

The Clerk: Your address?

The Witness: 1027 Val Vista, Baldwin Park.

The Clerk: Take the stand.

Direct Examination

By Mr. Lewis Lyon:

Q. What is your present occupation, Mr. Tuttle?

A. Salesman.

Q. In conjunction with what industry?

A. The non-ferrous, foundry. [307]

Q. Have you ever been engaged in the refrigeration business at any time? A. Yes, sir.

Q. When? A. From about 1923 to around 1940.

Q. Were you ever at any time employed by the York Corporation?

A. Yes, sir, during all that period.

Q. During all that period? A. Yes, sir.

Q. Where?

A. For the first about eight months I was in San Francisco, and then I was transferred to Los Angeles.

Q. Beginning then about 1924 up until 1940 you were employed by the York Corporation in Los Angeles, is that correct? A. Yes, that is about right.

Q. What were duties as employed by York Corporation?

A. You mean over the whole period? I changed jobs several times.

(Testimony of William R. Tuttle)

Q. Briefly starting out with your first employment.

A. I started in the shop in San Francisco and went on erection, and I handled the shipping in Los Angeles when I first came down here, worked in the engineering department [308] for a year, handled purchasing and finally purchasing, erection and service.

Q. What was your position with the company during the years 1938 and '39?

A. Handling purchasing and erection and service.

Q. Where, here in Los Angeles?

A. In Los Angeles.

Q. Did you ever during your employment become acquainted with the Recold system of water defrost?

A. Sure.

Q. When?

A. Shortly after it came out, but I can't tell you when.

Q. Can you state the circumstances of your becoming acquainted with that system?

A. Why, yes. Mr. Jarvis and I were friends in a business sense and he kept me posted on their developments so I knew while they were developing the defrost coil about it.

Q. Did you at any time import the story of water defrost to the York organization here in Los Angeles?

A. Yes.

Q. How was it received?

A. They told me it was an exploded idea, that York had tried it out years ago and it didn't work.

Mr. Neave: I object to what they told him, your Honor. [309]

The Court: I think you had better lay a better foundation.

(Testimony of William R. Tuttle)

By Mr. Lewis Lyon:

Q. Who did you talk with in that regard, Mr. Tuttle?

A. Mr. Dalin.

Q. That is the Mr. Dalin who is sitting here at plaintiff's table?

A. That is right; the plant engineer.

Q. Anyone else?

A. Yes, several members of the sales department, although I don't recall anyone in particular except Mr. Walling who was in the commercial department.

Q. When did this conversation take place that you say you had with Mr. Dalin?

A. After I had been out and seen several installations.

Q. Was there anyone else present at that conversation?

A. There might have been but I can't remember. Gee, that is a long time ago, you know.

Q. Will you state what both you and Mr. Dalin said at the time of that conversation?

The Court: In substance.

The Witness: Yes, sir.

After having been out and seen an installation, I reported back to Mr. Dalin what I had seen. I don't remember how much detail I went into, but I merely informed him about [310] it, when I received the answer that it was an exploded idea, that York had thrown it out years ago, or some such thing as that.

By Mr. Lewis Lyon:

Q. Did he make any statement as to whether or not it would or would not work in his opinion?

A. Oh, yes; it wouldn't work.

Mr. Lewis Lyon: That is all.

The Court: Cross examine.

(Testimony of William R. Tuttle)

Cross Examination

By Mr. Neave:

Q. Mr. Tuttle, you talked only with Mr. Dalin and to Mr. Walling about this matter?

A. No, that isn't what I said.

Q. Who else did you talk with?

A. I can't recall, different members of the commercial and industrial sales department. I couldn't tell you the names of them though.

Q. You don't remember the names?

A. Not necessarily; no.

Q. You said that it wouldn't work a moment ago. Was that your own conclusion, that it wouldn't work?

A. That isn't what I said.

Q. What did you say?

A. I said that Mr. Dalin said it wouldn't work. I [311] didn't say I did.

Q. What was your view?

A. I knew it would work.

Q. You knew it would work?

A. Yes, I saw it in operation.

Q. Did Mr. Dalin say why it wouldn't work?

A. No.

Q. He just said that it wouldn't work?

A. That is as I recall it.

Now don't you misunderstand me. That is a long time ago. This is my remembrance.

Q. Surely. That is all I am trying to find out, what you remember about it.

(Testimony of William R. Tuttle)

What else did Mr. Dalin say at that time?

A. I can't recall exactly what he said. He merely indicated that I had wasted my time and was wasting his, so just forget about it.

Q. Did he say why he didn't like water defrosting?

A. No, other than it wouldn't work.

Q. He just said it wouldn't work?

A. That is right.

The Court: When was this conversation? You say you left in 1940. Was it a year or so before you left the York Corporation?

The Witness: Yes, sir. I can't tell you exactly. I [312] would say—

The Court: About 1938 or '39?

The Witness: Somewhere around there; yes, sir.

By Mr. Neave:

Q. And you say that he didn't tell you as to why it wouldn't work? A. No.

Mr. Neave: That is all.

Mr. Lewis Lyon: That is all.

The Court: This witness may be excused?

Mr. Lewis Lyon: Yes, your Honor.

The Court: Step down.

(Witness excused.)

The Court: Next witness.

Mr. Lewis Lyon: Mr. Doble.

## WILLIAM A. DOBLE

the witness on the stand at the time of adjournment, having been previously duly sworn, resumed the stand and testified further as follows:

## Direct Examination (Continued)

By Mr. Lewis Lyon:

Q. I believe, Mr. Doble, at the conclusion of yesterday's session you had started in to state your analysis of Claim 3 of the McAdam patent in suit, is that correct?

A. I don't remember starting on the analysis of [313] Claim 3. I was prepared to start on the analysis of Claim 1 and carry up through Claim 3, which is dependent upon Claim 1.

Q. Will you briefly carry through your analysis of the claims in this patent making it as brief as possible, beginning with Claim 1. You have made an analysis of Claim 13, I believe.

A. That is correct, sir.

I have now placed a large analysis of Claim 1 on the easel.

The Court: That is the same as the copies you have handed around, Exhibit DD?

The Witness: Yes, your Honor. All the large charts are merely duplicates of the smaller ones.

The Court: All right.

The Witness: And I will point out the elements of Claim 1 as they are found in the Recold unit and in the York unit.

The claim calls for "in combination with a refrigerated space." The refrigerated space in the Recold is the blue portion.

The Court: As you described it yesterday?

The Witness: As I described it yesterday.



(Testimony of William A. Doble)

In the York structure it is the same as I described yesterday.

“A refrigeration coil 5 in said space having frost accumulating surfaces.” The coil 5 is the green member on the [314] Recold chart and the corresponding green member illustrated on the York chart.

By Mr. Lewis Lyon:

Q. That is the fin coil that you were speaking about yesterday, Mr. Doble?           A. That is correct.

Q. Will you by a reference to the Recold unit, which is now in court, set fourth for the benefit of the record the construction of that coil unit?

A. From the model which you have brought here?

Q. From the model; yes.

A. I am now describing the model of the Recold unit which has been brought into court. It includes a rectangular metal outer case which encloses a series of horizontal coils which pass horizontally back and forth through the conduits of the casing.

Q. With return bends at each end?

A. With return bends at each end.

Mounted on those coils are metal fins, as they are called. They are thin sheet metal pieces which are perforated to receive the pipe, and the pipe is expanded to make a close thermal contact with the fins, so that the heat absorbed by the fins is readily conducted to the cooling coil contained within the casing.

Mr. Lewis Lyon: I think that is the point that I desire [315] to make clear at this time, Mr. Doble. You may proceed with your analysis of Claim 1.

(Testimony of William A. Doble)

The Court: No claim is made in this patent for the fins or the unit?

Mr. Lewis Lyon: No, your Honor. This patent doesn't necessarily deal with the construction of the coil or the exchange unit in that respect.

The Court: Go ahead.

The Witness: The second element of Claim 1 reads: "A valve-controlled conduit 17 for periodically supplying water to said surfaces during a defrosting period."

And that included the red spray pan—pardon me—that included the conduit which is colored orange leading from a valve to the red spray pan 14 in the Recold unit; and included the yellow conduit 17 leading to the red spray head in the York construction as I described it yesterday. [316]

The element 3 of claim 1 calls for "and valve means 18 connected with said conduit for normally venting said conduit to the atmosphere to effect the draining of all portions of said conduit within said space after each defrosting period and for admitting water to said conduit during said defrosting periods."

That is the valve as indicated by the purple and yellow colors in the Recold unit as I described it yesterday; and is the purple and yellow valve as I described yesterday in the York unit.

The Court: What do you mean, "venting said conduit to the atmosphere"?

The Witness: Referring to the Recold chart, it will be noted, your Honor, that the valve member 25, which is the yellow member, is in a position to open the port 19 of the patent so that any water which may be in the drip pan or in the conduit has the free passage at all times during its

(Testimony of William A. Doble)

normal operation to pass out of the conduit 17 to drain to a point of disposal, which may be the sewer. And it will be noticed that that conduit carries outside of the refrigerated space because if any water were allowed to accumulate or drip within the refrigerated space of course it would turn to ice because it is far below the freezing temperature of water. [317]

By Mr. Lewis Lyon:

Q. Does that not mean that that is a free gravity flow to the atmosphere, Mr. Doble?

A. Yes, sir.

It will be noted that in each instance in the Recold job the conduit 17 is open and inclined at such a degree that any water in there will just run right out. That is the point, to get the water out.

The Court: What do you mean, "venting it to the atmosphere"? That isn't vented to the atmosphere.

The Witness: In many cases it is.

The Court: It just drips out on the ground?

The Witness: It just drips out on the ground.

The Court: Instead of going to the sewer.

The Witness: It can be either, depending on the election of the operator.

The Court: I see.

The Witness: In the same way the York valve, or the valve member illustrated by the color yellow in the York chart is turned to such a position that the port through it is open so that any water draining from the spray head through the orange conduit 17 will pass out to the atmosphere or to the sewer, in which instance you have identity in structure, mode of operation and result.

(Testimony of William A. Doble)

Now that concludes the entire combination as set forth [318] in that claim and with the coil may be successfully defrosted in a very rapid time without the difficulty of the spray head or the conduit freezing, so that it will be in condition for the next operation, which may be the following morning or two days later.

Are there any questions on that, your Honor?

The Court: You said by claim 1 you could defrost it?"

The Witness: That is right.

The Court: You can't defrost it unless you drain the water off, can you?

The Witness: That is correct. You have to drain the water out or it will freeze in there and your system is blocked.

The Court: What about the water that drips down over the freezer in claim 1 without a pan which is covered by another claim?

The Witness: That is true, and that is the difference between this claim and the other claims in the patent.

In that case you might do as the York manual suggests. In their manual they suggest if you use this type of coil in this type of a refrigerated space that is maintained below zero that you disconnect the drain from the pan because it will freeze up, and you substitute therefor a bucket to catch that drain water. Rather silly, but that is what they recommend. [319]

In some instances the people might want to save that water and might want to save it otherwise, but that would be possible, and that is the recommended practice in the York manual.

(Testimony of William A. Doble)

By Mr. Lewis Lyon:

Q. Proceed with claim 2, Mr. Doble.

A. Claim 2 includes the entire combination as defined in claim 1 with the addition of the drip pan, which is the red member, which has the lower member with the red x's which receive the water, and is found in the Recold as the member 8 and is found in the York as the member 8, likewise colored with red x's.

Claim 2 adds to that: "and a self-draining conduit 12 leading from said drip pan to points external to said space."

Now that is the drain conduit 12 which I pointed out yesterday, and is illustrated on the charts with the yellow crosses, and connects to the red crossed drip pan so that any water is immediately carried outside of the space and is either permitted to drip out on the ground or is carried to a sewer, or the two might be connected as in the case of the York where we find the spout from the drip pan is connected to the yellow drain conduit which, in turn, is connected to the drain from the inlet conduit 17. The two are just connected together so they drip either to the ground or [320]

The Court: Or in a bucket.

The Witness: Or in a bucket.

Mr. Neave: Which would be silly.

The Witness: It might be, but at least it wouldn't freeze out there in normal weather.

That concludes the combination of claim 2 which, added to claim 1, makes a little further step in the operative organization set forth in the patent.

The next claim is claim 5.

(Testimony of William A. Doble)

Mr. Lewis Lyon: Claim 3.

The Witness: Excuse me. May I take claim 5 because I have it on the chart.

By Mr. Lewis Lyon:

Q. Mr. Doble, confine your specific analysis to these claims now as to the elements, if any, which you have not previously covered and particularly pointed out as found in both of the structures. I believe that you have pointed out the exactness of the structures as to the elements which you have covered. Now if there is any element in any of the claims that you have not so covered, will you now cover that?

A. In claim 3 it calls for an element—I do not have a chart on claim 3—claim 3 adds to claim 1 the specification that, reading from claim 3: “The combination as in claim 1 and in which said conduit has a relatively low specific heat.” [321]

Now I didn’t mention that yesterday, I do not believe, as fully as maybe I should.

The patent discloses a preferred form of invention and states—

The Court: That discloses it in the description; it doesn’t disclose it in the claim. That is, it shall be a conduit with the least specific heat.

The Witness: Yes, and in the specifications it mentions that might be rubber or some other type of material that doesn’t readily store a volume of heat. That is what it means, that it is not capable of absorbing a volume of heat, so that when the fluid passes through it does not have the ability to freeze the water. That is what that means.



(Testimony of William A. Doble)

By Mr. Lewis Lyon:

Q. Do you find such a conduit in the York structure?

A. Yes, sir.

Q. In fact, the York structure uses, or employs even the suggested use of a rubber hose in the drain conduits, does it not?

A. Yes, it does.

Referring to the York structure in the large chart which I have, the section of the conduit 17 between the red spray head 14 and the immediate lower bend portion of the conduit 17, there is supplied a section of rubber hose which [322] connects the spray head to the lower portion of the conduit 17.

Also as the conduit 17 and also the conduit 12 passes through the walls of the refrigerated space there is provided a rubber hose.

Q. Now the next claim that includes a statement of operations which you have not discussed I believe is claim 5, is that correct, Mr. Doble?

The Court: Claim 4. You haven't said anything about 4.

By Mr. Lewis Lyon:

Q. Claim 4 merely adds a further element to claim 1 which you have already discussed in conjunction with your last answer, isn't that true?

A. Yes, sir.

The Court: Claim 4 was the rubber hose on the drain and the other was the low specific heat on the intake.

The Witness: That is right, your Honor.

The Court: All right.



(Testimony of William A. Doble)

The Witness: Claim 5—I think we discussed claim 5 yesterday—it is merely the size of the conduits which are such that as the water drains out of them the air will naturally flow in and follow the water so that the water flowing out acts as a piston, you might say, to suck the air in and carry with it any drops of water that might be hanging to the [323] drip pan or hanging to the sides of the conduit, so it helps to clean out the conduit so as to prevent later freezing or reduce the damage by later freezing.

By Mr. Lewis Lyon:

Q. I believe that having made that explanation in your previous answer and the answers previously given, you have made a complete comparison of the elements in claim 6 as set forth in your chart, isn't that true, Mr. Doble?      A. That is true, Mr. Lyon.

Q. The same is true with respect to claim 7, is it not?

The Court: Except claim 6 adds a pan.

The Witness: We discussed the pan, your Honor. That is that lower drip pan 8.

The Court: Very well.

The Witness: Which is found in each.

By Mr. Lewis Lyon:

Q. Is there any element of claim 7 that you have not previously described and pointed out the similarity or exactness between the defendant's and plaintiff's structures?

A. No, sir. I have pointed all of the elements out as defined in claim 7.

(Testimony of William A. Doble)

Q. Now with respect to claim 8, have you discussed the specific definition of the invention as set forth in claim 8, Mr. Doble. [324]

A. Yes.

The Court: What is the difference between 7 and 1, 2, 3, 4, 5 and 6? 7 is merely a combination of all you have got in 1, 2, 3, 4, 5 and 6, isn't it?

The Witness: I think it is set up a little differently, your Honor. It defines specifically a spray head where in claim 1 the specific definition of the spray head is not made per se. It is included more generally in the second element which calls for valve control for supplying water to the surface of the defrosting surface during the defrosting period.

The Court: Claim 7 adds a spray head?

The Witness: It adds it in specific form.

Mr. Lewis Lyon: That is right.

The Court: All right.

The Witness: Claim 8 I have just discussed, which is the relationship of the pipe, that is, the diameter of the conduits, so that the air will be drawn through the conduits as they are drained to assist in the clearing of the conduits from moisture.

By Mr. Lewis Lyon:

Q. Have you discussed all of the elements in claim 9 or are all of the elements in claim 9 found in both defendant's and plaintiff's structure? That claim describes a specific form of valve, does it not? [325]

A. Yes, it does. I have already described the valve in both Recold and the York structures and have pointed out that they contain a plurality of ports and passages to obtain the result of maintaining the water supply conduit open to the atmosphere so it will drain at all times

(Testimony of William A. Doble)

excepting when defrosting, at which time the drain valve is closed and the water supply from the common tap water is connected to the supply conduit to feed water to the coils for defrosting.

Q. Is that valve described anywhere as being a three-way valve in any of these claims, Mr. Doble?

A. No, it is not.

Q. Is it equally possible to use two single valves as a three-way valve in accordance with the definition of these claims? A. Yes, it is.

Q. That is, put one valve on drain 12 and one valve on drain 17 and use them separately?

A. No, that wouldn't be right, Mr. Lyon. You have to put one, as I can point out on the chart, one valve would be put on the water supply which is indicated on the chart with the pink color. That is the supply from the tap water. You would have to put a valve there to shut that off.

Then you put a second valve down below on the conduit 17, down below the purple valve body so that in normal operation the lower valve, when the conduit 17 would be open, any moisture in the conduit 17 could drain. If you were going to defrost you would merely shut that valve off and open the valve on the tap water side to allow the water to flow up to the spray head, so that you could use two valves instead of the single three-way valve.

The three-way valve is a convenience and has some advantages, and the double valve setup has other advantages.

(Testimony of William A. Doble)

Q. Is there any element of claim 10 which you have not described and point out that is found in each of the structures, Mr. Doble? By either of the structures I mean plaintiff's or defendant's?

A. I believe I have covered all of the subject in claim 10 during my discussion of the two devices yesterday.

The Court: What is this, "fins arranged on said coil to provide vertical channels extending from end to end thereof for gravitational flow of water over said fins and coil and channels extending from face to face thereof for flow of air?" Do you have to have that kind of a fin in order to use this invention?

The Witness: No, you do not, your Honor. You can use any type of coil, whether it has fins or not. That claim is more specific to that particular type of coil.

You see, each claim is just a little bit different to cover a little different combination of means. [327]

By Mr. Lewis Lyon:

Q. That claim describes, does it not, Mr. Doble, the complete structure of the Recold unit using the fin type coil through which the air is blown and the water defrosting combination that is added to that specific combination of fin type blower coil?

A. Yes, Mr. Lyon. That is wherein it differs from the other claims.

The Court: What is this "thermosyphonic flow of air"?

The Witness: That is a high-powered word, your Honor, that means this, that if, for example, we take one of the hot gas or hot brine or other hot means for defrosting the coils and pump that hot fluid through the coils, the

(Testimony of William A. Doble)

coils would heat up. The heat in turn would heat the air. When the air heats it expands and the expansion of that air would be lighter than the cold air so it would rise and the cold air would fall.

The advantage of the Recold invention is that by the particular arrangement of the coils you do not get the same extent of that circulation due to the heating of the coil, that is, the circulation of the refrigerated air due to the heat of the coil, as you would if it were not en-housed the way it is with a top header and a lower header and the blower on the side.

The Court: All right. [328]

By Mr. Lewis Lyon:

Q. Now you have covered the addition of claim 11 to claim 10, and with respect to the slow heat conducting and specific heat conducting material, have you not, Mr. Doble? A. Yes, I have.

Q. Claim 12 is specifically included in your chart analysis, is it not? A. Yes, it is, Mr. Lyon.

Q. And set forth in detail showing each element, and you have described each element, its application to both structures as found in both structures in claim 12?

A. Yes, sir.

Q. The same is true with respect to claim 13?

A. Yes.

Q. Claim 14 differs, does it not, from the other claims in calling for the electrically operated valves

A. Yes, sir.

The Court: That is the only difference?

The Witness: Yes, sir.

(Testimony of William A. Doble)

By Mr. Lewis Lyon:

Q. That element is not used by the plaintiff corporation, as far as you know?

A. That is correct.

Mr. Lewis Lyon: That is all. You may cross examine. [329]

Cross Examination

By Mr. Neave:

Q. Mr. Doble, do I understand that all of the space within the four walls as shown in blue in your diagram is the refrigerated space? A. Yes.

Q. Everything inside of there is inside the refrigerated space?

A. Yes. That shows a portion of the refrigerated space. Normally the room would extend out larger. I have broken off one side of it.

Q. Yes.

The Court: Is the device there proportionate to the size of the barrels?

The Witness: No, your Honor. That is an artist's conception.

The Court: All right.

By Mr. Neave:

Q. In your analysis, which is Defendant's Exhibit DD, in making that analysis did you take the York unit as set forth in the stipulation with respect to the commercial unit? A. Yes, sir.

Q. That is, the unit that is sold to private concerns and not to the government?

A. That is correct. [330]

(Testimony of William A. Doble)

The Court: That is your description of the commercial unit?

Mr. Neave: I beg your pardon, your Honor?

The Court: That is the agreed description between you of what the commercial unit is?

Mr. Neave: Yes.

The Court: In other words, it is everything except what is sold to the government?

Mr. Neave: Yes.

Q. And I understand it, Mr. Doble, you derived your drawings from that? A. Yes, sir.

Q. And if there was any difference between your drawings and that stipulation, then your drawings are incorrect?

A. Well, my drawings are not a line-for-line duplication of that blueprint.

Q. I understand that. But structurally?

A. Structurally that is correct.

Q. I think you pointed out that there are many claims in the patent that are not limited to finned coils.

A. Yes.

Mr. Neave: Your Honor, I call your attention to the patent on page 2, column 1, line 22: "Also the present invention is directed to all manner of coils \* \* \*"

Q. Now to your knowledge, finned type of coils for re- [331] frigerated units were old prior to 1937, were they not?

A. Yes—pardon me. I haven't finished my answer.

Q. I am sorry.

A. Yes, finned coils by themselves were very old before the date you have stated, but the fin coil is new in the



(Testimony of William A. Doble)

combination as set forth in those claims in this patent in which it is combined as an element.

Q. I understand that that is your position. Now I am asking you only as to each individual element. Alone the fin coil is old.

A. Alone the fin coil is old, but it is new and makes a new combination as set forth in the claims of the patent.

Q. Yes, you said that before.

The Court: There isn't anything there that isn't old, is there?

The Witness: That is right.

The Court: Fans are old, iron pipe is old, valves, rubber hose, pans are all old.

The Witness: Yes.

By Mr. Neave:

Q. Do you agree with that, that each of the elements is old.

A. Each of the elements is old but in being brought into this particular combination it has provided a new entity which is divorced from any one element and is the com- [332] posite of all of those elements which produce a new result which has never been produced before.

Mr. Neave: I think that is for your Honor to decide.

The Court: That is his position.

The Witness: That is my position.

The Court: But he concedes that all the elements obviously are old.

By Mr. Neave:

Q. You concede that all the elements are old?

A. Yes.

(Testimony of William A. Doble)

Q. Isn't it so that each of those elements individually perform the function which was the old function. Let us take them individually, Mr. Doble. The fan was old and that acts as a fan?

A. Yes, but it performs another function.

Q. Just let me ask this question first and then I will let you answer it further, if you want to.

A. But I thought you had finished your question.

Q. No. Is it so that it performs the same function of blowing?      A. The fan blows.

Q. Yes.

A. But in doing so it causes a different conditions than you would normally have with just a blowing fan. It causes a deposit of frost upon certain coils and in this combination it must be shut off during certain parts of the operation of the cycle of that organization so it can't be just separated as a unit and say, well, a fan is a fan. Sure it is, but not in that combination.

Q. Let me ask you this: All of these claims are apparatus claims, are they not?

A. Yes, sir.

Q. There is no method claim among them?

A. No, there is not.

Q. And each claim is for a combination of elements which are structural elements, is that correct?

A. That is correct.

Q. Now the fan is old and operates as a fan?

A. The fan is old and operates as a fan to produce certain results in this combination, and if it didn't produce those results there wouldn't be any need of it in that particular combination.

(Testimony of William A. Doble)

Q. I am talking about the structure now, Mr. Doble. I think that you can answer that from the point of view of the structure. I understand what your position is about the combination, but now I want to know about the structure.

This structure of fan is to rotate and produce blowing of air, isn't it? A. At certain times.

Q. Yes. [334] A. Pardon me.

Q. I am talking about the structure.

A. Let me finish my answers, too.

At certain times it acts as a fan and at other times it acts as a fan.

Q. When it is turned on it acts as a fan?

A. When it is turned on it blows air.

Q. And when it is turned off it doesn't blow air?

A. That is right.

Q. And that was true of fans before, wasn't it?

A. Certainly.

Q. Let's take the next element, the coils. Now those finned coils were old, weren't they?

A. Finned coils?

Q. Finned coils themselves are old.

A. As themselves they are old.

Q. All right.

A. But new in this combination.

Q. Well, now, just answer the questions.

A. I did answer the question. I am giving you my explanation for that answer.

The Court: He can explain his answers.

Mr. Neave: Yes. I am perfectly willing to have him explain them.

(Testimony of William A. Doble)

The Court: He has been on the witness stand before. [335]

Mr. Neave: Apparently.

The Court: We will have a short recess at this time.

(Short recess.) [336]

The Court: You may proceed.

Mr. Lewis Lyon: Your Honor. I don't believe I introduced Exhibit DD in evidence. I would like to introduce it in evidence. That is the claim chart your Honor has. I do not believe it is necessary to encumber the record with the enlargements of that which the witness has specifically referred to, unless your Honor so desires.

The Court: No, I don't think it is.

(The document referred to was marked Defendant's Exhibit DD, and was received in evidence.)

[Note: Defendant's Exhibit DD will be found in the Book of Exhibits at page 1539.]

Q. By Mr. Neave: I think, Mr. Doble, we were on the fin coils when we stopped. Now, am I correct that the function of the fin coils in this device of the patent is to absorb heat? Is that right? A. That is correct.

Q. And that was the function of fin coils prior to this invention, was it not?

A. Yes, that was the function of fin coils prior to this invention, but the combination which includes those fin coils is new.

Q. That is your conclusion?

A. That is my conclusion.

(Testimony of William A. Doble)

Q. But so far as the functioning of fin coils is concerned, they functioned to absorb heat prior to the McAdam fin coils? [337]

A. Yes, but not in the combination such as disclosed in this patent, which is new, and which I have never seen before.

Q. Very well, you have never seen it before. But so far as the coils are concerned, they do absorb heat?

A. Yes, sir.

The Court: He has answered that.

Q. By Mr. Neave: All right. Now, then the valve,—I think you called that a 3-way valve?

A. You can call it a 3-way valve.

Q. Yes. That was an old type of valve?

A. I have already said it was a very old type of valve, but I have never seen it operate before in the combination of the patent in suit, where it maintains open for drainage a passage when there is a sub-freezing atmosphere, and then later can be operated to close that passage and supply water to that passage.

Q. Have you ever seen it operate to open, to allow liquid to go through the valve, and then closed to prevent the liquid from flowing through the valve, and to allow the liquid in front of the valve to drain out through the valve? A. May I have the question read?

(The question was read.)

Q. That is upstream, I mean, by "in front."

A. It is rather a confusing question, isn't it?

Q. Well, what was the operation of the 3-way valve prior [338] to McAdam's invention?

The Court: It was identical with this except that it wasn't used to take it into this combination?

(Testimony of William A. Doble)

The Witness: That is right.

The Court: With your usual "but"?

The Witness: That is right.

Q. By Mr. Neave: And the function of all the parts of the combination was the same in the prior art except for the usual "but"?

A. I am sorry. I didn't get the question.

Q. Will you read it?

(The question was read.)

A. Well, they all separately are old, and they have had separate modes of operation, but in this combination you have a new entity which brings out a different result and a combined result of all of those elements to produce the final result which makes the thing successful. You can't eliminate the valve and have a successful unit. You can't eliminate the pipe and have a successful unit.

Q. I see. You agree with my question?

A. No, I don't agree with that.

Q. You agree, but. Now, Mr. Doble, in defrosting the Recold unit,—you have observed the defrosting of the Recold unit?      A. Yes, sir. [339]

Q. After it has been defrosted, does water remain on the pipes?

A. Well, that is a relative question. You mean a thin film or a volume of water?

Q. Just any water.

A. The pipes are, you might say, wet.

Q. Yes. Have you ever observed hot gas defrosting?

A. No, I have not.

(Testimony of William A. Doble)

Q. Now, with respect to the spray-head, which I think you marked 14 on your drawings, Defendant's Exhibit DD, the patent shows an enclosed tank, does it not?

A. It appears to be a closed tank, yes, sir.

Q. Except the spray holes and the entrance?

A. I understood that is what you meant.

Q. Yes. What is the form of the spray-head on the Recold unit.

A. In the unit itself?

Q. Yes. Isn't it an enclosed tank, such as in the patent?

A. That I cannot answer. I haven't opened one of the structures to look at it.

Q. Now, if that tank is enclosed, I suppose that in order for the water to get out of it it must draw air in through the spray holes?

A. Not at the start. I can explain that this way,— [340]

Q. Will you, please?

A. Referring to the Recold chart on the easel, and especially to the one entitled "Defrosting Operation," it will be noticed that the inflowing water has trapped and compressed a body of air at the upper part of the enclosed spray-head. That pressure created there, as long as the drain is open, will immediately start the force to draw water out, and as the water recedes down the pipe, the drain conduit 17, air will be drawn through the openings 15, so that the water may proceed on down the pipe.

Q. Well, the water will not flow, I suppose, unless the pressure above the water in the enclosed tank is greater than atmospheric pressure?

A. Well, it would be very much higher than atmospheric pressure at the start, and would accelerate it and



(Testimony of William A. Doble)

give that water momentum, which would pull the air in from the little openings 15.

Q. And thereby allow the water to drain out?

A. Yes, sir.

Q. Now, have you got the patent before you?

A. Yes, sir.

Q. Turn to page 2. Well, before I ask you this question, Mr. Doble, was it not customary to stop the fan when defrosting on units that were in use prior to 1937?

A. Are you referring to sub-freezing or above-freezing [341] units?

Q. Either one.

A. Yes, I believe that was customary.

Q. With respect to your conduit 12, does the patent give any specific diameter for it?

A. No, not in dimensions. It defines the diameter such that as the water flows through it it will draw a slug of air along with it. If it is too large and the supply of water is too small, of course you would not do that in the same way.

Q. It does not give a specific length?

A. No, that would vary in each installation. That is a matter left to the normal installation engineer, who would know what length he needed to connect up to the unit as it is installed in the refrigerated space.

Q. It doesn't give any specific inclination of the pipe?

A. Only in so far as the drawing shows it in the patent. The drawings specifically indicate, you might say, two different slopes for each of the drain conduits. The slopes appear to be different in Figure 1 than they do in Figure 2, so the installation engineer could take his choice

(Testimony of William A. Doble)

and use either one, or any other that would perform the function of that combination.

Q. Well, both the conduits 12 and 17 have to be big enough and long enough and sufficiently inclined so as to [342] freely drain the water off?

A. I will answer that yes, this way: they have to be long enough to extend outside of the refrigerated space, but their length is not a very important factor with relation to their diameter.

Q. But that is left to the man who installs it, and he would know the proper size?

A. Yes, he would install—he could install the proper size from the teachings of this patent.

Q. And he would know what inclination is necessary in order to produce this slug?

A. Well, he is given two different inclinations in the patent, and he would use either anything in between—either those two or anything in between, so it is left to him to make his choice.

Q. Isn't that the same drainage that you have in draining water out of any vessel like a bath-tub or a sink?

A. No, not at all, because when you drain a bath-tub it is usually not mounted in a sub-freezing space.

Q. But you want to get the water out?

A. You want to get the water out.

Q. And you want to make the drain large enough in order to get it out?

A. Yes, and in most bath-tubs they don't make it large enough. It takes too long. [343]

(Testimony of William A. Doble)

Q. And in a kitchen sink when you see a swirl-pool going out, that is the slug of water going out and drawing air in?

A. I don't know if you would call it a slug of water. It is a current of water which is rapidly rotating and makes a little vortex and forces little air bubbles down.

Q. It pulls air through?

A. It pulls air through.

Q. Now, will you turn to page 2, column 2, line 33?

A. Yes, sir.

Q. That reads as follows:

“Also, in keeping with features of this invention the conduit shall be of rubber or some composition having a lower heat transfer factor and a lower specific heat factor than metal.”

I show you Plaintiff's Exhibit 100, and ask you to turn to page 592. Do you agree with the definition of specific heat given there, which reads:

“The specific heat of any substance is the ratio of the heat required to raise the temperature of a unit weight of that substance one degree and the quantity of heat required to raise the temperature of the same weight of water one degree, usually from 62 to 63 degrees F.”?

A. I agree with that, but that is only one of the [344] definitions.

Q. Yes, but that you do agree with?

A. Well, I agree with Mr. Kent, usually.

Q. Now, tell me, do you agree that the specific heat of rubber is .481, as shown on page 594 of Plaintiff's

(Testimony of William A. Doble)

Exhibit 100, Table 6? It is about the fourth item from the bottom in the right-hand column.

A. Of course, I will agree with the table. I know Mr. Kent's. I have used him many times and I know he sets forth the proper specific heat of rubber, but I am not sure from this table whether the specific heat of rubber, as indicated here, is per weight or per volume, which would make some difference.

Q. I see. Will you look at Table 1?

A. Pardon me. For example, the specific heat of rubber per volume is .25 to .44. Of course, that deals with pure rubber. We are not dealing with pure rubber. Hose has a lot of cotton and other materials in it, but, as we know it in commercial practice and used in this instance, it does have a low specific heat. That is what he means, as he states in the first part of that paragraph.

Q. I didn't ask you what he means. I am just asking you about this exhibit here.

Mr. Lewis Lyon: Finish your answer, Mr. Doble.

Q. By Mr. Neave: All I want to know is whether you [345] agree.

Mr. Lewis Lyon: Your Honor, I believe the witness should have an opportunity to finish his answer.

Mr. Neave: May I finish my statement first?

The Court: Was your answer calculated to explain the previous portion of your answer concerning specific heat?

The Witness: Yes, your Honor, in this way: because the patentee is entitled to make his own definition, and I think we have got to look to the patent for just what he is trying to convey to the John Doe who is going to make and put this unit into operation. And his definition there

(Testimony of William A. Doble)

is this, that he wants to put a substance in there that has very little capability of storing or of absorbing heat, so that when the initial water flows in that conduit, by its inability to absorb heat from the water will not cause that water to solidify. That is what is meant by that paragraph of that patent, and that is meant by the specific heat definition and the thermal heat content he refers to. This is a dislocated definition of specific heat. It deals with pure materials, and it is not definite here whether it is per volume or per weight.

Q. By Mr. Neave: All right. Will you turn to Table 1 of Plaintiff's Exhibit 100 and tell me whether or not you agree that the specific heat of copper is .0951, which is shown in the left-hand column of that table, the fourth item from the bottom? [346]

Mr. Lewis Lyon: I believe the witness has already answered that, that he agreed with Kent's tables, so far as they go in each respect.

The Court: He has a right to ask him.

The Witness: Naturally I agree with what Mr. Kent says, as I stated before, but this table—I haven't been able to determine from this table whether that is based on the specific heat by weight or by volume, and, of course, copper is very heavy and it makes a difference.

Q. By Mr. Neave: Now, I would like you to tell me whether or not, in your opinion—or, not in your opinion, but as a matter of fact, to your knowledge, rubber has a lower specific heat factor than metal.

A. Yes and no. If you take it by weight, rubber has a specific heat from .27 to .48, of course, depending upon its purity. That is by weight. And by volume it is from .25 to .44.

(Testimony of William A. Doble)

Q. All right. What are the corresponding metal—

A. Iron is from .1, by weight. By volume, it is .77. It is practically seven times, the difference, when you take it by weight or by volume. Brass, which is very close to the alloy, includes a great deal of copper, and is .09 by weight and .74 by volume. So it depends on which specific heat you are talking about.

Q. What is the figure on copper? [347]

A. I don't have it for copper here.

Q. Now, if you compare the specific heat by volume of rubber and brass, which is the lower?

A. Rubber is the lower.

Q. And if you compare it by your other system?

A. By weight?

Q. By weight. A. Brass is the lower.

Q. Now, is there any indication in the patent as to which the patent was referring to? A. Yes.

Q. Where is that?

A. Not in just those words. Referring to that same paragraph on page 2 of the patent, commencing at line 33 in the second column, the patentee states:

“Also, in keeping with features of this invention the conduit shall be of rubber or some composition having a lower heat transfer factor.”

Now, that is the part that you are overlooking. The patentee is interested in putting the material in there which has very little ability to absorb heat. Now, we can do that either by rubber or by metal, depending upon the volume or weight of those substances used. The important thing is that you don't make that pipe capable of absorbing enough heat to freeze the water as it flows in



(Testimony of William A. Doble)

there, and that is what the patentee is [348] talking about here, and that is what he means by his specific heat.

Q. What you want to do—

A. (Continuing) And he means by low specific heat there that it hasn't the ability to freeze the water when the water flows into the spray-head.

Q. What you are saying is, is it not, Mr. Doble, that unless the water goes through there and doesn't lose its heat content to the extent that it will freeze, you will be able to have a flow of water and it won't be frozen up inside there?

A. That is correct, and that is what the patentee wants to be sure the people using the invention will understand, so that when they use it, it will work.

Q. In other words, that you pass water through there in sufficient volume so that it will have enough heat content so that it will not freeze?

A. You mean by "freeze" the ability of the pipe to withdraw heat from the water, I judge?

Q. Irrespective of any way it might lose its heat.

A. That is correct.

Q. And on page 2, column 2, line 66, it says:

"Like conduit 12, this conduit 17 shall act, when just about to fully drain, to provide a slug or moving piston of leaving water which will draw [349] air after it thru perforations 15 and thru spout 16 in such manner that residual water will be dislodged or removed to an extent that the drain system just described shall not become subsequently clogged by freezing of residual water."



(Testimony of William A. Doble)

Now, does it make any difference as to the speed with which the water goes through there, as to whether this residual water will be taken away, from the size of the pipe?      A. The size of the pipe, the conduit?

Q. Yes, the conduit.

A. Well, I don't think it much matters at what speed it goes through. The water will drain out of it, if that answers your question. I don't fully understand that question.

Q. That answers my question. Now, referring to claim 8 it says that the conduits are of such proportionate diameter with respect to length as to cause draining water to finally draw air after it through the corresponding conduit.

There are no figures given in the patent as to that proportion. I mean in the exhibit.

A. Not in the form of dimensions, but the drawings indicate the proportion which the person desiring to use the invention can use.

Q. And that person would know how far he could depart in one way or the other from what is shown in the drawings?

A. I believe he would. I would, and I wouldn't say I [350] am any more competent than most refrigerating engineers, if as competent.

Q. Now, the patent shows an electrically-operated valve, does it not?      A. It does.

Q. The Recold unit doesn't use such a valve?

A. Well, I don't know that it doesn't. Those I have seen haven't.

(Testimony of William A. Doble)

Q. I am just asking you what you know.

A. Those I have seen haven't, but the patent only shows one preferred form, and I believe the patent also states that any other form of valve could be used.

Q. Now, in the valve used by Recold, I don't mean the patented valve, I mean the one used by Recold, that you are familiar with,—

A. Yes, I am.

Q. —it is vented to the atmosphere when you turn the handle to the drain position; is that right?

A. It is vented to the atmosphere outside of the refrigerated space?

Q. Yes.

A. Yes.

Q. And you have to turn the handle in order to bring that about?

A. Yes, sir, unless it is already in that position. [351]

Q. Yes, exactly. Now, will you turn to claim 10, Mr. Doble. It is mentioned in that claim, in line 4 of the second column,

“said fins, said spray-head and said drip pan respectively co-operating to substantially prevent thermosyphonic flow of air over said coil and fins when the fan is discontinued whereby the air of said refrigerated space does not rise above the freezing point of water during the time required for defrosting said coil and fin surfaces.”

Is there any use of the word “thermosyphonic” in the specification?

A. I have not found that word in the specification.

Q. Is there any statement in the specification as to how the fins and the spray-head and the drip pan shall co-operate to prevent thermosyphonic flow?

A. Not in those words.

(Testimony of William A. Doble)

Q. Yes.

A. But the teaching of the patent is so clear on that and the drawings are so clear that they result—you might say that that word is the summation of the structural advantages, as defined in the specifications and as shown in the drawings.

Q. Are they clear to you? A. Certainly. [352]

Q. You would know about the thermosyphonic flow of air by just looking at the drawings, would you?

A. I certainly would.

Q. Would you know how to build the fins and spray-head and the drip pan to co-operate to prevent this flow of air?

A. I don't believe it would entirely prevent it. I think what the patentee means is that it will reduce it to a very low degree, because wherever you have a differential in heat, you will always have that flow, thermosyphonic flow.

Q. I asked you whether you would know how to so make or place those elements in order to prevent that, from the specification. A. Yes, and the drawings.

Q. How would you know that?

A. By reading the specification and looking at the drawings. It is inherent. You can't help it.

Q. It doesn't tell you about thermosyphonic flow in the specification?

A. It doesn't use that word, but it is only the summation of the operational advantage you get by using the structure as defined in the specification and as shown in the drawings.

(Testimony of William A. Doble)

Q. Well, I must say, Mr. Doble, that it isn't clear to me.

A. Well, I don't see how you could operate in the [353] refrigerating art and not have it clear to you.

Q. Now tell me this: suppose you raised the pan about five inches above the coil. Would that affect the thermosyphonic flow?

A. Which pan do you refer to?

Q. The header. A. The spray-header?

Q. Yes. A. Yes, that would affect it.

Q. Is there anything in the patent about that?

A. Yes.

Q. Does it say not to put it in that position?

A. If you raised it, say five inches, that would only change the syphonic flow very slightly, but the drawings indicate in what portions, or indicate the position of the spray-head in relation to the coils, so you have a clear teaching.

Q. Is there anything in the patent that says how far you can depart from the drawings and not get this result?

A. Well, you can depart from the drawings as long as you get the result of the patent. As soon as you change or you don't get the result, then you no longer use the patent.

Q. There is nothing in the patent that says anything one way or the other about thermosyphonic flow?

A. Yes, by drawings and by description, but not that one [354] word. That is only the summation.

The Court: You said "in the patent."

Mr. Neave: Oh, it is in the patent.

The Court: That is where you got the word from.

(Testimony of William A. Doble)

Mr. Neave: I beg pardon. I mean, in the specification.

The Witness: That is the word to summate the particular thing set forth in the specification and shown in the drawings of the patent, and any refrigerating engineer would certainly understand it.

Q. By Mr. Neave: And they would have understood that prior to 1937?

A. Certainly. That is an old phenomena. But he might not have understood that relationship in this particular combination.

Q. That is your "but"?

A. That is my "but" and I stand by it.

Q. Now, isn't it a fact, Mr. Doble, that none of the claims excepting claim 10, 11 or 13 mention anything about temperatures?

A. Temperatures,—in what respect?

Q. Well, as to whether the refrigerated space is above or below freezing.

A. Yes, they do. I will refer to claim 1. Claim 1 states,

"In combination with a refrigerated space." [355]

Now, to understand what that means, we turn to the first two paragraphs in the patent, appearing on page 1, starting at line 1, reading:

"My invention relates to low temperature refrigeration where a space is required to be constantly maintained at temperatures below the freezing point of water,"—that is very, very definite—"and the invention relates more particularly to methods and devices for defrosting the coils or heat transfer surfaces used in maintaining such conditions."

(Testimony of William A. Doble)

We have got to maintain that sub-freezing condition.

Q. Yes.

A. Now, wait a minute. I haven't finished.

Q. Oh, I am sorry.

A. This is the second paragraph starting in at line 8:

"Where the air which is being recirculated over these low temperature surfaces never rises above the freezing point of water periodic defrosting under maintained low temperature conditions has presented many problems."

And that was his problem, how to meet that condition and solve it, and that is what Mr. McAdam solved. Continuing the reading of that paragraph:

"It is an object of this invention to provide simple [356] and highly effective means for so defrosting."

That definition clearly defines the temperature at which these combinations are to be used, and defines clearly that the refrigerated space is to be maintained at all times below the freezing temperature of water.

Q. So that you are interpreting the term "refrigerated space" in the claim from the specifications?

A. You have to. You always interpret the elements in the claims from the specifications. You know that.

Q. You won't say "Yes" to that?

A. I have no objection to saying "Yes," if you ask a question so that I can say "Yes."

The Court: And so long as you can say "but."

Q. By Mr. Neave: Now, Mr. Doble, apart from that phrase "in combination with a refrigerated space,"—apart from that phrase, taking claim 1, the rest of the claim are elements of an apparatus; isn't that true?

A. Yes.



(Testimony of William A. Doble)

Q. That is the refrigerating apparatus?

A. Yes, but that apparatus has to be used in combination with a refrigerated space. Otherwise, there is no problem.

Q. Yes, all right. Now, suppose that you took the present Recold unit that we have here in the room, and suppose that you operated it in a space that was not below freezing. Would it not be so that all of the elements, the apparatus [357] elements of these claims would be met by that Recold device?

A. Yes, they would, and let me point this out, that I have never seen in the prior art, prior uses, or any of the invention literature, any attempt to use the combination as set forth in this patent in an above-freezing temperature.

The Court: In an above-freezing temperature?

The Witness: In an above-freezing. I haven't seen that combination any place.

The Court: Have you seen it in below-freezing?

The Witness: Yes. That is not prior to this patent. I have seen it since this patent. That taught me. I didn't believe the thing would work either when it was first presented to me.

The Court: You mean you haven't seen the device used in above-freezing rooms?

The Witness: No, I haven't seen it used in above-freezing rooms, or any other.

The Court: You haven't seen it used at all?

The Witness: Yes, in below freezing. But the thing is, it would work very nicely in above-freezing rooms. But that isn't the problem Mr. McAdam had to solve. Mr. McAdam's problem was, "How in the dickens am I



(Testimony of William A. Doble)

going to get the frost from the coils when the darned thing is at below-freezing?" That is the thing the engineers have struggled with. That is the thing the York Company has struggled with. They have [358] tried all kinds of things.

Mr. Neave: I object to what the York Company has struggled with.

The Court: Yes, Mr. Lyons will make the argument.

The Witness: I grant you, your Honor, I have gone too far there.

Q. By Mr. Neave: Now, tell me this, Mr. Doble, it was known, wasn't it, that water would melt ice?

A. Oh, yes, but here is my "but"—but not in a sub-freezing refrigerated space that is maintained at that sub-freezing temperature during the defrosting, during the melting of the ice and snow.

Q. You mean it wasn't known that water would melt ice if the atmosphere were below freezing?

A. Well, I suppose it was known, but it was never applied to solve that problem.

Q. It was never applied in a refrigerator unit, you mean?

A. I won't say that, because sometimes they will take a hose and pour water on a coil, but usually they let the room heat up.

Q. Well, you agree with me, then, don't you, that water will melt the ice even if the atmosphere is below freezing?

A. Yes, Mr. McAdam teaches that. That is the teaching of his patent, how to do it.

(Testimony of William A. Doble)

The Court: How does it happen that we see all the ice [359] on these buildings when they have a fire—of course, not here?

The Witness: Because the temperature, your Honor, is below freezing and the water freezes. That is what everybody thought, that if you used water in a sub-freezing atmosphere the whole thing would freeze to a cake of ice. It was an absurd proposition. If you would take it to an engineer, he would say, "You are crazy." I thought it was crazy, too, when it was first presented to me.

Mr. Neave: The witness is expressing his own views, your Honor, and I move they be stricken out.

The Court: I think so.

Q. By Mr. Neave: Mr. Doble, let's go back again to the use of water for defrosting refrigeration coils. Now, do you know in the literature any device which used water to defrost refrigerator coils where the surrounding air—defrost them with water where the surrounding air was below freezing?

A. I cannot answer that question because it is too indefinite in this respect: by "surrounding air" do you mean the entire unit was surrounded by air?

Q. I mean, the air around the coils themselves.

A. Now, may I have that question read, please?

(The question was read.)

Mr. Lewis Lyon: I think the question had better be reframed, your Honor. [360]

The Court: Do you understand it?

The Witness: It is kind of confusing, your Honor, because he doesn't define his structure well enough to be able to place it.

(Testimony of William A. Doble)

Q. By Mr. Neave: Well, do you know in the literature of any water defrosting of coils where the air surrounding the coils was below freezing temperatures?

A. At the time the water is applied?

Q. At the time the water is applied.

A. And you are using tap water?

Q. That is right.

A. I don't know of any place in the literature where that exact situation is described or would meet that exact definition. It has been practiced in taking a hose into a refrigerated room and melting the ice from the ordinary pipe coils, and probably when they started the atmosphere was below freezing, and when they finished it was probably well above freezing.

Q. Now, what was your experience in regard to refrigeration prior to 1937?

A. I had the good fortune of making a patent on a refrigerating system.

Q. What was your experience in the refrigerating field?

A. My experience was that of most people, of using refrigeration equipment, and I at one time started designing [361] a small refrigerating plant for my own use, because I wasn't satisfied with those on the market. I always felt the old line companies were too slow in adopting the new things, and I was going to design my own job. Then I made an invention in 1931 for a defroster, because I was living in an apartment house and they had a central defrosting system, and about every time I would get the box loaded up nicely, the manager would defrost, and I would have trouble. So I invented an electric system for defrosting that could be operated by

(Testimony of William A. Doble)

the person living in the apartment, so I wouldn't have my box defrosting when I didn't want it defrosting.

Q. That was the only experience that you have had with respect to refrigeration?

A. No. Then in a case I experted down in Phoenix there was a refrigerating problem, and that problem was to pre-cool these refrigerator cars into which they put the fruit, because it was necessary to as rapidly as possible take the field heat out of the fruit, and there were various refrigerating mechanisms used in connection with that.

Q. For whom did you expert that?

A. Mr. Theodore Lassagne of San Francisco.

Q. Whom did he represent?

A. He represented the Phillips' interests.

Q. Wasn't that case after 1937?

A. It might have been, yes. [362]

It was definitely after 1937, but I have been associated with engineering all my life, and there is nothing mysterious about refrigeration. There are a lot of trade tricks, and one of the newest and prettiest wrinkles I have seen is this Recold business.

Mr. Neave: Here we go, your Honor. He is uncontrollable. I may have a few more questions, your Honor, if you are going to recess at 12:00.

The Court: All right. We will recess until 2:00 o'clock.

(Whereupon, at 12:00 o'clock noon, a recess was taken until 2:00 o'clock p. m. of the same day.) [363]

Los Angeles, California; September 19, 1946, 2:00 o'clock P. M.

The Court: Ex parte?

The Clerk: No ex parte, your Honor.

The Court: Proceed.

Mr. Neave: No more questions, Mr. Lyon.

The Court: Redirect?

Mr. Lewis Lyon: No redirect, your Honor.

The defendant rests.

Mr. Neave: May it please the court, I would like to offer in evidence as Plaintiff's Exhibit 101 a book of prior patents relied upon. This book contains seven patents, Nos. U. S. 389,098 to Newman, 958,471, to Brassert, No. 1,002,576 to Gayles, No. 1,045,433 to Payne, No. 2,097,-851 to Wenzl, a French patent No. 800,640 to Jensen and Roser, and United States Patent No. 389,652 to Heltzle.

I have an extra copy of this book here if your Honor would like it.

The Court: Thank you.

(The document referred to was passed to the court.)

Mr. Neave: I will give Mr. Lyon one copy because it has some tabs attached to it and I may refer to the tabs.

Your Honor, I would like the court to turn to Tab 2.

Mr. Lyon has brought my attention to the fact that the French patent has the translation and that that translation [364] is incorporated in the book along with the French patent. I gave Mr. Lyon a copy of the translation some three or four days ago and asked him to let me know if there were any differences in his view as to the translation. I haven't heard from him yet about it.

Mr. Lewis Lyon: The translation is acceptable, your Honor. It is a rather flowing translation, but I don't believe it materially changes the meaning of the French patent. If it appears that there are any errors in that translation which we desire to dispute, we will call the court's attention to it, but I don't find them at the present time.

Mr. Neave: It may help your Honor to just look at these patents for a moment. I suggest that you turn to Tab No. 2 first, the patent to Brassert, No. 958,471.

Now in this patent, as he states in the second paragraph, it "relates to the drying of air by refrigerators for metallurgical purposes, as in the well-known Gayley dry blast system."

The first prior use that we will introduce here is of the use of the so-called Gayley dry blast system. In Pittsburgh where air was dried by being cooled to pass into blast furnaces, the dry air apparently has an efficient effect on the production of metal, steel, or whatever it may be, in blast furnaces.

This patent shows the cooling room where the air is [365] cooled. The lines marked 4 are coils and above them you will see spray nozzles 5. Water is sprayed through those nozzles down over the coils to defrost them. The water falls down into the pit 10, is taken from there by the pump 12, and passed into the condenser as a cooling medium and then passes again through pipe 15 to be sprayed down over the coils.

On the first page, the first column, the bottom of the page, line 45, it says:

"In the drawing, I show a building or enclosure 2, containing a series of chambers 3, within each of



which is contained the coils or cooling pipes 4. Above the coils in each chamber one or more spraying nozzles 5 is arranged in such manner that the thawed liquid can be evenly distributed by them over the surface of the coils. Preferably, warm water from the ammonia condensers is supplied, though any supply of water at a temperature above freezing can be used."

The next patent, in Tab 3, is the patent to Gayley, No. 1,002,576. If your Honor will turn to the figure 6 opposite the text of that you will see that this is another of the Gayley system cooling devices. This is an improved chamber showing spray heads, and it is stated, in the third paragraph, the first column, line 20:

"My invention relates to the drying of air by [366] refrigeration in accordance with the well-known system of my prior patents, and is designed to economize in the cost of operation by forcing the air into closer contact with the cooling pipes, and at the same time insure the flowing of the thawing water over the cooling pipes in removing the congealed moisture therefrom."

If you will now turn to Tab 5, the Wentzl patent, No. 2,097,851, and Fig. 1, which is on the first page that you come to as you open up the tab, it shows a cooling device which has finned coils and over them is a spray head which is marked 15 with hole 16.

Fig. 2 shows a cross-sectional view of the spray head 15.



Paragraph 2 of the patent states:

"It is an object of my invention to provide a cooler by which the air in the room, etc., is cooled to a low temperature by an efficient refrigerant, such as brine, or a cooling gas, but in which, notwithstanding the fact that the temperature at the outer surfaces of its cooling elements must never be higher than zero degrees, frosting is kept within such limits as to not give trouble, without uneconomic power demand or oversizing of the cooler."

Then down further, on line 33, it says:

"At the same time, the air is cooled to a tem- [367]  
perature below zero degrees."

The Court: Where is that?

Mr. Neave: That is line 33, on page 2, the second paragraph. It is a description of the spray pipe.

Now the next patent, Tab 6, is the French patent, and I would suggest that your Honor will turn to the drawing first and then turn to the specifications.

This is a device in which there are coils—

The Court: Where is the drawing?

Mr. Neave: It is at the back of the French patent.

The Court: Yes, I see it.

Mr. Neave: This is a device in which there are refrigerating coils which go up and down on the inside, and right over the top of the coils there is a ring. In Fig. 1 you only see half of it. It is cut in two. That is the spray head.

Fig. 16 out on the right-hand side is the conduit into the spray head.

15 I believe is the similar spray head itself which you can see down in Fig. 2.

Mr. Charles Lyon: 15 is the shell.

Mr. Neave: That may be true. I will check it with the specifications. The whole thing is 16, your Honor.

Now the water is sprayed out and down and is collected in the drip pan at the bottom and the discharge pan 18 and [368] discharged from the pipe 18. At the top is a fan which sucks the air up through the coils and blows the air out of the top.

If your Honor will turn to the third page, or if you wish to look at the drawing I will read from the third page:

“The air of the cooling chamber enters the device in the manner indicated by the arrows. It traverses the passageways and passes through the pipes of the container. The cold created by the refrigerant introduced into the container is transmitted to the air contained in the inside of the device. At the instant that the temperature of the thus-cooled air reaches, for example, -2 degrees C., a thermostat 17, preliminarily set for the desired temperature, makes contact to start the blower which forces the dry, cooled air against the ceiling of the cooling chamber from which the air descends as a properly distributed blanket. The blower keeps the air of the chamber in continuous circulation, which is of advantage in the preservation of foodstuffs.

“Whenever defrosting becomes necessary, such operation may be readily effected either by a current of air obtained from outside the cooling chamber or by means of a circulation of water. The stream of

air or water passes through pipe 16 disposed above the container 2. This pipe is pierced with openings [369] to permit the air or water to flow uniformly through the container and its pipes and into its passages.

"The condensed moisture and the water used for defrosting are collected by the trough 14 and conducted by a siphon pipe 18 outside the cooling chamber without causing the condensed moisture and the water introduced into the device from saturating the air of the cooling chamber.

"Whenever the cooling elements are to be defrosted, the thermostat automatically breaks contact and stops the motor."

I failed to mention that in the preceding patent, the Wenzl patent, it also had a fan, which your Honor probably noticed.

The Court: I noticed it.

Mr. Neave: Now if your Honor will turn back to Tab 1 on the first sheet of drawings is a rather complicated device but it is simply an electrically operated valve for draining pipes against freezing. If we will look at the device at the bottom of the drawing, the pipe at the left of the drawing—I think it is A6; my copy is a little dim—is where the water comes into the valve.

There are two valve seats A4, seats on A5, and A8 which is just to the right of it. While the valve is in its second position seats at A7. [370]

The vertical pipe just above the valve chamber is the service pipe through which the water flows up and also comes down.

When the device is in the position shown the water drains down through the service pipe and out through the

port at the right and through the annular space A9 around a shaft there and out of the valve.

The Court: What valve.

Mr. Neave: In the space A9 I think it is. That is the way it drains out.

Now when the solenoid, the electrical device here is operated, it moves the device to the right closing the port A7 with the valve A8 and opening A4 from A5. That allows the water to come down into the valve and up through the service pipe, the vertical pipe.

The Court: How does it defrost?

Mr. Neave: It has nothing to do with a defrosting device, your Honor. It is just a method of draining pipes in a house against freezing. The whole thing is an automatic device.

The Court: It is a 3-way valve?

Mr. Neave: It is a 3-way valve.

The Court: An automatic 3-way valve?

Mr. Neave: An automatic 3-way valve, just like the one in the patent. [371]

Now Tab 4 is a frost-proof watercloset seat. That is the Payne patent, No. 1,045,433.

Again here is a 3-way valve, which can be seen at the bottom right-hand side of the page. That is placed below ground where it won't freeze. The water comes in from the main through 7. The water comes in and goes up through the pipe 6 and through the pipe 2 and flushes the bowl.

Now in the position shown, the valve is closed. It only operates when somebody sits on the seat so as to let the water go in to flush the bowl. When the weight is removed from the seat then the valve lowers in the position shown and the water drains down through the center.

through 11 and then out through the small ports that you see below 10 and through the pipe 8. That is a 3-way valve to be used to bring water into a zone which is cold, freezing, and then drain everything down as soon as its usefulness is past.

Turn now to Tab 7, and we have a very old patent, the patent of Heltzle, No. 389,652, which is a 3-way valve or stop-and-waste cock.

The patentee says, in the second paragraph:

“My invention relates to improvements in stop and waste cocks, which are placed in cellars of buildings, having the inlet-water pipe connected at one end and water-supply for upper stories [372] connected at the other end; and the object of my improvements is, first to provide means for controlling the water-supply by automatic arrangement between my stop and waste cock and draw cock of sink in upper stories; also, to disconnect the same, as will be explained hereinafter; second, to drain said supply-pipe of water to prevent freezing in cold weather, and, third, to provide ready means in upper stories, by means of which said supply-pipe can be drained of water, obviating the necessity of going to basement or cellar of a building, as usual in the old way.”

Now if your Honor will turn to the drawing I think you can best see by looking at Fig. 3, the center of the sheet. This is the stop-and-waste valve, and it is in the cellar where it won't freeze. Now the water from the main comes in on one side. This valve is in position where the water will flow through. F is the moving valve part.

The horizontal dotted lines show an opening in the valve. If you will look at Fig. 6 below you will see an annular opening, and the water goes through there.

Now when the valve is raised as in Fig. 2, that annular opening is raised up so that it prevents the water from coming through from the main but it will drain back from the right-hand pipe and down through the dotted lines shown at [373] the bottom of the valve there—it looks like an f to me—and down through the spring and out through the hole d at the bottom.

In other words, it is another stop-and-waste valve or 3-way cock.

I do, however, want to call your Honor's attention to the bottom part, the last paragraph of the second column of the specifications of this same patent, where it says:

“It is well known that the water-supply pipes of buildings are more or less placed in exposed places, and that the water contained therein is liable to freeze in the fall and winter season, causing damage by the bursting of the pipes. It is therefore especially desirable, in extreme cold weather, both day and night, that said pipes should be drained at all times and water-supply controlled.”

Mr. Neave: I would like to offer in evidence as Plaintiff's Exhibit 102, pages 181 and 182 of a publication entitled “The Care of a House,” by T. M. Clark, published in 1903.

Reading on page 181:

“It is very often necessary to leave plumbing to itself for long periods, while the house in which it is situated is closed, and special precautions are necessary to protect the fixtures, either from destruction by frost in winter, or from losing by [374] evapora-



tion, in summer, the seal of water in the traps which forms the only barrier against the escape of sewer-air into the rooms.

“When the house is to be left to itself in winter, it is absolutely necessary, in the climate of any part of America north of Florida, or east of the California ranges, to remove water entirely from the supply-pipes. This is done by shutting the main stop-and-waste cock, always placed just inside the cellar wall, usually in a little pit, with a sand bottom, where it will be safer from freezing, and where the water which escapes from the waste-tube will be absorbed by the soil. This water, which often spouts out in copious stream, when the shut-off is closed, comes from the house-pipes, the stop-cock being so arranged that, after communication with the street main is closed, a passage is opened to drain off the water standing in the house-pipes, which could not otherwise be removed, and would freeze if it were left undisturbed. After closing the main shut-off, and draining away such water as will flow through its waste-tube, all the faucets in the house should be opened, not forgetting the sill-cock on the outside of the house, so as to allow the water in the short lengths of pipe leading [375] to them to run out, as well as to admit air, and release the column of water which might otherwise be held in the main vertical pipes by atmospheric pressure; and the cistern-valves supplying the water-closets should be held open, by means of the chain or rod, until all the water in the cisterns has run out through the closet basin.”

Your Honor, we would like to proceed with the introduction of the depositions, and I would like now to know



what procedure your Honor would like to follow in the reading of the depositions.

The Court: I am always trying to find a new way to do it easily and quickly. Maybe you have it.

Mr. Neave: I think they should be read, and I would suggest that Mr. O'Hearn here do the reading to save me doing it.

The Court: Frequently we do it by question and answer, two people reading, one reading as if they were a witness and the other as if he were examining him. I think that the testimony flows a little better that way.

Mr. Neave: We would be very glad to do it that way if your Honor would like to have it.

The Clerk: Are these two exhibits in evidence, your Honor?

The Court: Yes. Admitted. [376]

(The documents referred to were received in evidence and marked Plaintiff's Exhibits 101 and 102 respectively.)

[Note: Plaintiff's Exhibits Nos. 101 and 102 will be found in the Book of Exhibits at pages 1243 and 1295.]

Mr. Neave: I would like to have Mr. O'Hearn follow the file copy, read from the file copy, if he could, because I think that there were some corrections made.

Also your Honor suggested the other day that it might be helpful if we had a list of exhibits which we are going to offer, which we have made up, and I will give you two copies.

(The document referred to was passed to the court.)

Mr. Neave: Perhaps at this point I might save some time by reading into the record a couple of stipulations.

The Court: With respect as to facts?

Mr. Neave: One stipulation is as to the dates—yes, dates of invention of McAdam patent, and the other is as to the use of copies.

The Court: Very well.

Mr. Neave: "It is hereby stipulated for the purposes of this cause of action by and between plaintiff and defendant thereto, through their respective attorneys, that the date of conception of the McAdam Patent No. 2,219,393 upon which defendant will rely is during the month of September, 1937, and that the date of actual reduction to practice of the invention of the said McAdam patent upon which defendant relies is during the month of October, 1937."

The second stipulation, your Honor, is as follows: [377] "It is hereby stipulated by and between the parties hereto, by their counsel, that uncertified printed or photostatic copies of any United States or foreign patents, and photostats or photographs of any publication, letter or other document, may be received in evidence with the same force and effect as the originals; that the date of application and patenting printed upon any patent, and the date of publication appearing upon any publication shall be taken to be the actual date of application, patenting or publication as the case may be, subject to correction if error should appear."

Those are both stipulated to, are they not, Mr. Lyon?

Mr. Lewis Lyon: That is correct.

The Court: Very well.

Mr. Neave: We have an exhibit, your Honor, which is not in that book and perhaps we could put it on the desk next to you. It is a physical exhibit.

The Court: Is anybody going to testify about it?

Mr. Neave: The depositions are.

The Court: Let us put it over here on this corner then.

Mr. Neave: I believe in transit there has been a piece that has been knocked off. It will be produced in a minute and your Honor will be able to see where it is supposed to go.

This piece here is meant to fit on the top, and this is supposed to go like this. (Illustrating) With your Honor's permission and with counsel's permission, we will put it back [378] on.

The Court: Will the first deposition deal with that?

Mr. Neave: Yes, your Honor, the first series of depositions.

We are going to start the depositions, your Honor, in the order in which they were originally taken, and that is the order in which the exhibit numbers run.

Does your Honor want me to take the lectern or may I sit here?

The Court: I think you had better take the lectern.

Mr. Neave: May it please the court, this deposition starts with a stipulation, which I shall read.

The Court: Is it just the usual stipulation?

Mr. Neave: Yes, it is, about the taking of the testimony, and so forth.

The Court: Is it necessary to read that? Why not just let the reporter copy it in so we can get on?

Mr. Neave: That is all right with me.

Mr. Lewis Lyon: Your Honor, it was suggested that we have had these transcribed once. Do we need them transcribed all over again?

The Court: I do not think that it makes any particular difference as long as you stay with the text of them. Some portions of them will probably be objected to.

Mr. Lewis Lyon: That is right. He might as well take [379] down.

The Court: The difficulty there is that when the record goes up on appeal, as all patent cases do, it makes a bad record on appeal.

Mr. Neave: Is it all right, Mr. Lyon, that the stipulation be copied by the reporter and not read?

Mr. Lewis Lyon: Certainly. [380]

In the District Court of the United States

Southern District of California

Central Division

Civil No. 4166-PH

York Corporation, Plaintiff, vs. Refrigeration Engineering, Inc., Defendant.

Depositions taken on behalf of plaintiff, York Corporation, at the offices of Brown, Critchlow & Flick, 1706 First National Bank Building, Pittsburgh, Pennsylvania, pursuant to the attached notices, before Gertrude E. Ryan, Notary Public, starting at 10:00 A. M., Friday, February 9, 1945.

Appearances: For Plaintiff: Alexander C. Neave, Esq. William O'Hearn, Esq.

For Defendant: Lewis E. Lyon. Esq.

It is stipulated by and between the parties by their counsel:

1. That the hearing today is held pursuant to notices served upon the defendant and now before the Notary, Miss Gertrude E. Ryan.

2. That the provisions of Rule 26 (a) of the Federal Rules of Civil Procedure that depositions taken prior to

services of answer shall be by leave of the court, is hereby waived. [381]

3. That the witnesses shall be sworn by Miss Ryan, who is fully qualified under the provision of Rules 28, sections (a) and (b) of the aforementioned Rules.

4. That the testimony given here shall be taken stenographically and transcribed by Miss Ryan.

5. That the testimony, when transcribed, shall be submitted to the witness for examination and shall be read to or by him, and any changes in form or substance which the witness desires to make shall be entered upon the deposition by Miss Ryan, with a statement of the reasons given by the witness for making them.

6. That the signing of the depositions as read and corrected by the witness is hereby waived.

7. That Miss Ryan, after duly certifying the depositions, shall send them by registered mail to the Clerk of the District Court of the United States, Southern District of California, Central Division, for filing.

8. That the cost of the original transcript, exhibits, attendance fees and notary's fees shall be borne in the first instance by plaintiff, but shall be eventually charged as taxable costs to the losing party.

FRANK C. BAUER

called as a witness on behalf of plaintiff, having been first duly sworn by Gertrude E. Ryan, Notary Public, testified as follows: [382]

Direct Examination

By Mr. Neave:

DQ1. Will you please state your name and address?

A. F. C. Bauer—Frank C. Bauer, 1997 Perrysville Avenue, Pittsburgh, Pennsylvania.

(Deposition of Frank C. Bauer)

DQ2. What is your present occupation, Mr. Bauer?

A. Chief Engineer, Isabella Furnaces, Etna, Pennsylvania.

DQ3. The Isabella Furnaces of what company?

A. Carnegie-Illinois Steel Corporation.

DQ4. How long have you been with that corporation?

A. Isabella Furnaces, let me see. I started there in December, 1923. Previous to that I worked for the old Carnegie Steel Company.

DQ5. Are you in charge of the engineering records at the Isabella Furnaces? A. Yes.

DQ6. Do these records include original tracings of drawings and original correspondence pertaining to the Isabella Furnaces? A. Yes.

DQ7. And are those records under your direct custody and control?

A. Yes. That is all the records are not under my charge—that is just the engineering records. [383]

DQ8. Mr. Bauer, I show you a blue print which is marked in the lower righthand corner, "Carnegie Steel Company, Isabella Furnaces, Dry Blast Plant, No. 940" and with the date on here "June 2, 1906." I ask you whether you can produce from your files or files under your custody the original tracing of this blue print.

A. Here it is.

DQ9. Would you be good enough to compare the blue print and the original tracing and tell me whether or not the blue print is a blue print and exact copy of the original tracing?

A. This print is an exact copy, a blue print of this tracing from our files.



(Deposition of Frank C. Bauer)

Mr. Neave: Will you please mark the blue print No. 940 as Plaintiff's Exhibit No. 1?

Mr. Neave: May I state, your Honor, that these are the Pittsburgh depositions?

The Court: These exhibits that I have are called Yamhill depositions.

Mr. Neave: I am sorry.

The Court: Have you a quicker way to do it?

Mr. Lewis Lyon: I have heard cases where it has been deemed to have been read subject to the ruling on any objections contained therein by the court without spending all the time reading it. It is nearly 600 pages. Our average of pages of testimony is 150 pages a day. We can spend better [384] than four days reading these depositions.

Mr. Neave: I think we can, your Honor, but on the other hand they have got to be read some time and considered by you.

The Court: The difficulty with taking and reading them when I have time is that as soon as I get off the bench in this case I am crowded with a lot of other matters and by the time I get around to reading your depositions I probably will have OPA cases, conscientious objector cases, and heaven's knows what in my mind, and I would rather take an extra day or two.

Mr. Lewis Lyon: That is all right with me, your Honor.

The Court: If it isn't too much burden on counsel.

Mr. Neave: No, that is all right.

The Court: Usually the lawyers who have the depositions to offer prefer to read them and then they know they are read.



(Deposition of Frank C. Bauer)

Mr. Neave: I have no doubt about that, your Honor.

The Court: Well, I think we might as well proceed.

By Mr. Neave;

DQ10. I show you photostats of three letters—

Mr. Lewis Lyon: What about the exhibit?

Mr. Neave: The exhibit has already been marked in the deposition. I don't know what your practice is here.

The Court: What I would suggest for time saving on these [385] is that you complete your deposition, let them be marked, and at the conclusion of the deposition offer all the exhibits in evidence.

Mr. Neave: Yes.

The Court: That will save time, rather than offering them as we go along.

Mr. Neave: Very well.

DQ10. I show you photostats of three letters, written on the letterhead of Carnegie Steel Company, all of them addressed, "Dear Bruce" and signed "Bob," one letter being dated July 22, 1906, the second letter being dated July 23, 1906, and the third letter being dated July 24, 1906. There is also a fourth letter similarly addressed and signed, dated July 25, 1906. I show you these letters and ask you whether you have had, in the records of the company and under your custody, the original letters from which these photostats were made and, if so, whether you can produce them.

A. The first letter is an exact copy of the letter from our files.

DQ11. What date?

A. July 22, 1906. That consists of three pages. It is addressed as "Dear Bruce." That is likely Bruce Walter who was chief engineer in charge of this dry blast plant

(Deposition of Frank C. Bauer)

at that time. And the signature "Bob" was probably Bob Taylor.

DQ12. Are there three pages to this letter of July 22? [386]      A. Three pages; that completes that one.

DQ13. What about the letter of July 23? Before you go to the letter of July 23, let's go back for a moment to the letter of July 22, Mr. Bauer. Would you look at the original letter of July 22nd and see whether you were correct in stating that it consists of three pages rather than two?

A. I would say that third page applies to the letter. He says, "He will have to give her another 2 per cent today or tomorrow."

"Think about this." In other words, he is referring to a furnace.

DQ14. Now we are on the letter of July 23.

A. July 23, I have the one sheet. I am looking for the other sheet. This is it. That doesn't seem to be the continuation of that letter.

DQ15. Mr. Bauer, would you look at what you said was the third sheet of the letter of July 22nd and see whether that is the second sheet of the letter of July 23?

A. That would fit on there but I can't say positively that that would be the second sheet of this letter.

DQ16. That is the letter of July 23?

A. That is right. Pity they don't put a date on the second sheet.

DQ17. Can you identify the first sheet of the letter of July 23rd with the original in your possession?

A. Yes. The first sheet is a photostat of a letter [387] from our files, dated July 23.

(Deposition of Frank C. Bauer)

Mr Lyon: The three sheets of the letter should be marked for identification in some manner.

Mr. Neave: I think you are right that it should be straightened out for the purpose of the record.

DQ18. Mr. Bauer, would you look at the three pages of the letter of July 22, 1906, that you referred to a minute ago? Now, these three sheets you referred to a minute ago, the first sheet is the first sheet of the letter with the date July 22, 1906?

A. That is correct. It is marked 2 p. m.

Mr. Neave: Let us have that marked as Plaintiff's Exhibit No. 2-A.

DQ19. And the second sheet you referred to begins with the word, "Started." Is that correct?

A. That is right.

Mr. Neave: I ask that the Notary mark that as Plaintiff's Exhibit No. 2-B.

DQ20. Now, the third sheet that you referred to is one which starts, "Think about this." Is that correct?

A. That is right.

DQ21. I refer you now for a moment to the letter dated July 23, 1906, the first page of which starts, "Dear Bruce" with the date on it. Is that correct?

A. That is correct. [388]

DQ22. Referring to the sheet of the letter which starts, "Think about this," I want to know whether you believe this to be the second sheet of the letter of July 23, 1906.

Mr. Lyon: I will have to object to that as being leading and as already having been asked and answered several times.

(Deposition of Frank C. Bauer)

The Court: Objection sustained.

Mr. Neave: I ask that the Notary mark the page which starts, "Think about this" as Plaintiff's Exhibit No. 3.

Mr. Lyon: You are merely asking that these be marked for identification at the present time. You are not offering them as exhibits?

Mr. Neave: No.

Mr. Lyon: That is true in all these cases?

Mr. Neave: That is true in all these cases.

DQ23. Are you pointing to Plaintiff's Exhibit No. 2-B and Plaintiff's Exhibit No. 3?

A. Comparing the writing, I would say that this third sheet applies to the letter of July 23, 1906, but I can't say positively, just comparing the writing.

DQ24. You believe Plaintiff's Exhibit No. 3 applies to the letter of July 23, the first sheet of the letter of July 23?

A. That is right but I can't say positively because the third sheet does fit on either of these letters.

Mr. Neave: I ask the Notary to mark the sheet of July 23, [389] 1906, as Plaintiff's Exhibit No. 4.

DQ25. I show you letter dated July 24, 1906, and ask you whether you can identify that from the original in your files.

A. Yes. This letter dated July 24, 1906, is an exact copy of letter from our files.

Mr. Neave: I ask that the letter of July 24, 1906, be marked Plaintiff's Exhibit No. 5.

Mr. Lyon: How many sheets is that composed of?

Mr. Neave: One sheet.

(Deposition of Frank C. Bauer)

DQ26. I show you a letter dated July 25, 1906, already referred to, consisting of two sheets and ask you whether this is an exact copy of a letter from your files.

A. Yes. This letter dated July 25, 1906, is an exact copy of the letter in our files, dated July 25, two sheets.

Mr. Neave: I ask that the letter of July 25, 1906, be marked Plaintiff's Exhibits No. 6-A and No. 6-B.

DQ27. Have you in the files of your company any blue prints of the Dry Blast Plant at the Northwestern Iron Company at Mayville, Wisconsin?

A. Yes.

DQ28. Would you produce such blue prints as you have?

A. Here are the prints, three of them. These are the three prints from our files.

DQ29. Will you identify them by legend that there may be on the prints?

A. Well, we never marked these prints. [390]

DQ30. I just want to have some means of identification as to what the prints are.

A. This is the Dry Blast Plant of the Northwestern Iron Company and they were probably made by Robert C. Taylor. His name is on the prints. That is the man referred to as "Bob" in the letters.

DQ31. Is that drawing to which you are referring marked "General Arrangement of Brine Piping Refrigerator Chamber No. 10?"

A. That is right.—

Mr. Neave: I ask that this drawing be marked as Plaintiff's Exhibit No. 7.

A. —Just a minute, do you want copies of these prints?

(Deposition of Frank C. Bauer)

DQ32. Yes. What is the next?

A. The second print is Dry Blast Plant, Northwestern Iron Company, General Arrangement of Water Piping, Thawing and Ammonia Condenser No. 13.

Mr. Neave: I ask that the Notary mark the print referred to by the witness as Plaintiff's Exhibit No. 8.

DQ33. What is the third blue print?

A. The third print Dry Blast Plant, Northwestern Iron Company, General Elevation showing water piping, No. 14 dated September 9, 1908.

Mr. Neave: I asked that this print be marked Plaintiff's Exhibit No. 9. [391]

Mr. Bauer, I will turn over to you plaintiff's Exhibits No. 7, No. 8 and No. 9 and will very much appreciate it if you can let us have three photostats of each of these prints to be made at our expense.

DQ34. Did you come to this hearing pursuant to a subpoena? A. Yes.

### Cross Examination

By Mr. Lyon:

CQ1. Mr. Bauer, did you say that you were in the employ of the Northwestern Iron Company at any time?

A. No.

CQ2. Did you say that you were in the employ of the Carnegie Steel Company, Isabella Furnaces, in June, 1906?

A. No. Well, let me see. Yes, I was in the employ of the Carnegie Steel Company but not at Isabella Furnaces.

CQ3. During June, 1906?

A. Yes, I was employed by the Carnegie Steel Company in 1906.

(Deposition of Frank C. Bauer)

CQ4. Where? A. In the city office.

CQ5. You weren't connected with the Isabella Furnaces at that time? A. No.

CQ6. How long was it after that before you became identified with the Isabella Furnaces? [392]

A. I started at Isabella Furnaces in December, 1923.

CQ7. And when were you first assigned the control of the files or when was it that the files were first placed under your supervision from which you have collected this matter including the plaintiff's Exhibits No. 1 to No. 9 inclusive? A. That was January 1, 1937.

CQ8. Prior to that date, you had had no control of these files, had you?

A. No. They were always in charge of the chief engineer.

CQ9. All that you know about these particular papers which you have produced here, Plaintiff's Exhibits No. 1 to No. 9, is that they are papers that you recently took from these files which are now under your supervision. Is that correct? A. Yes.

CQ10. Under whose direction and at whose request did you withdraw these papers?

A. Mr. McCarthy of the—I forget the name of that firm; this gentleman here, Mr. O'Hearn, and Mr. McCarthy. I understand that they were cleared through the city office. We were instructed to give them any information that they wanted in connection with dry blast.

CQ11. Mr. McCarthy being, as you understood it, a paid investigator. Is that correct? [393] A. Yes.

CQ12. Prior to the time when you were requested to withdraw these instruments from these files, had you, at



(Deposition of Frank C. Bauer)

any time before that, seen these particular letters or blue prints?

A. Not the letters. Those files have been in the vaults for years. We have had no occasion to look them up. But this particular blue print, this No. 940, while I had no occasion to use that, I have been through these tracing files many times and this drawing, while I could not say positively that I saw it in the files, yet I am certain it was there.

CQ13. You had no particular occasion to refer to it specifically until you were called upon to produce it. Is that correct? A. That is.

CQ14. And you don't recall having referred to it specifically for any information until you were called upon to produce it here? A. That is right.

CQ15. When you were called upon to produce these records, did you personally withdraw them from the file or request someone else to do it?

A. I had the file girl get the records out. The entire record was brought out into the drafting room and Mr. O'Hearn [394] and Mr. McCarthy went through it and picked out the items that they wanted. Then I had them cleared through the city office, photostats were made, were mailed directly to you gentlemen in New York, I believe.

#### Redirect Examination

By Mr. Neave:

RDQ1. You have no reason to suppose that Plaintiff's Exhibits No. 1 to No. 9 have not been in the regular files of the company ever since they were first placed in them, have you? A. No.

RDQ2. You believe that they have been kept regularly in those files? A. Yes.

Mr. Neave: It is stipulated that when photostats of Plaintiff's Exhibits No. 7 No. 8, and No. 9 have been obtained by Mr. Bauer one copy of each will be sent to the Notary, Miss Ryan, who will place them and keep them with the other Exhibits.

The next deposition is still on the same prior use at Pittsburgh, and is the deposition of Mr. Kernan.

A. RAPHAEL KERNAN

called as a witness on behalf of plaintiff, having been first duly sworn by Gertrude E. Ryan, Notary Public, testified as follows: [395]

Direct Examination

By Mr. Neave:

DQ1. What is your full name?

A. A. Raphael Kernan.

DQ2. And your residence address?

A. 220 Emerson Avenue, Aspinwall, Pennsylvania.

DQ3. What is your present occupation?

A. Superintendent of Industrial Relations, Isabella Furnaces, Carnegie-Illinois Steel Corporation.

DQ4. At Etna, Pennsylvania? A. Yes.

DQ5. How long have you been employed by the Carnegie-Illinois Steel Corporation?

A. September, 1909.

DQ6. At that time, was the company the Carnegie Steel Company or the Carnegie-Illinois Steel Corporation?

A. Carnegie Steel Company at that time.

DQ7. Are you in charge of the employment records of the employees of the Carnegie Steel Company or its successor, the Carnegie-Illinois Steel Corporation?

A. I am.

(Deposition of A. Raphael Kernan)

DQ8. Have you examined these records to determine the period of employment of the following persons: Jesse Brandt, Edward Kennedy, William Swope, Edward Har-kins and Harry Haney? [396]

A. I have examined those records.

DQ9. Can you give me the period during which Jesse Brandt was employed by the company?

A. I can. Jesse Brandt was employed originally at Isabella Furnaces on 5-20-02, the fifth month, twentieth day of 1902.

DQ10. Is he still employed by the company?

A. He is at present employed at Isabella Furnaces.

DQ11. Has he been so employed from that time to the present time?

A. There have been certain periods during slack operations when he was not employed but generally he was considered a permanent employee.

DQ12. Can you give me the exact dates of employment from your records?

A. I can. 5-20-02 until 31-1-08; 11-24-09 to 12-21-08, he was then at Lucy Furnaces which was a sister plant of the Isabella Furnaces; 12-22-08 to 12-8-1910, he was at Isabella; from 1-18-11 to 2-15-11, he was at Lucy Furnaces; from 2-17-11 until 4-26-11, he was at Isabella Furnaces; from 8-16-11 until 2-14-15, he was at Isabella Furnaces; from 5-16-15 until 5-14-21, at Isabella Furnaces; from 9-29-21 until 8-20-27, at Isabella Furnaces; from 3-13-28 until the present, he has been continuously employed. [397]

(Deposition of A. Raphael Kernan)

DQ13. Can you give me the employment information on Edward Kennedy?

A. Edward Kennedy was employed at Isabella Furnaces on 7-24-03 and he was there until 12-4-1915.

DQ14. How about William Swope?

A. William Swope was employed in February 1904, and he worked until August 1905. He was then re-employed in October, 1906, and he was employed until May 1908.

DQ15. Have you the employment information on Edward Harkins?

A. Edward Harkins was employed December, 1904, and he left there in December, 1905. He was re-employed in the ninth month, first day of 1906, and he was employed until the eleventh month, thirteenth day, 1906. He was employed from the ninth month of 1907 until the eleventh month, thirtieth day, 1907. He was re-employed on the first day of January, 1909, and he was employed until the sixth month, first day, 1910. He was then re-employed on February 1, 1913, until March 26, 1917.

DQ16. Can you give me the dates when Harry Haney was employed by your company?

A. Harry Haney was employed in July, 1906, until November, 1907. Then he was re-employed on the fifth month, first day of 1908. He continued until the seventh month, thirtieth day of 1908. He was re-employed on the [398] first day of the first month of 1909 and was with us until the fourth month, twenty-second day, 1911.

DQ17. Did you ever know Robert Taylor?

A. Yes, sir.

(Deposition of A. Raphael Kernan)

DQ18. What was his position with the company?

A. He had had several positions with the company. When I first knew him, he was an engineer at Isabella Furnaces. He later became superintendent of the Lucy Furnaces, and after that was transferred to the Isabella Furnaces as superintendent.

DQ19. Do you recall when he was superintendent of the Isabella Furnaces? A. Pardon me?

DQ20. Do you recall when he was superintendent of the Isabella Furnaces?

A. Yes. You mean the dates?

DQ21. Yes, approximately.

A. He was superintendent of the Isabella Furnaces in, I think he finished up in 1935 or 1936, or thereabouts. He had been superintendent from about 1932 to 1935 or 1936. I don't recall the exact date.

DQ22. Previous to that time, do you know whether Mr. Taylor did any work on the Dry Blast Plant at Isabella Furnaces?

A. Not from my personal knowledge. I understood he [399] had.

DQ23. You came to the company in 1909?

A. 1909, yes.

### Cross Examination

By Mr. Lyon:

CQ1. You have no employment record for Robert Taylor similar to the employment records you have read for the other individuals?

A. We have them available. I have not taken off a transcript.

(Deposition of A. Raphael Kernan)

CQ2. What you have taken off and brought here is a transcript or list of the dates of employment. Is that correct? A. That is correct.

CQ3. You haven't the records of employment themselves here? A. That is right.

CQ4. When were you placed in charge of these records? A. August 1, 1936.

CQ5. Prior to that time, had you anything to do with those records? A. No, sir.

CQ6. Are these records that are now under your exclusive control? A. They are. [400]

Redirect Examination

By Mr. Neave:

RDQ1. Do you know whether Mr. Taylor is still alive? A. Mr. Taylor is dead. [401]

JESSE O. BRANDT,

called as a witness on behalf of the plaintiff, having been first duly sworn by Gertrude E. Ryan, Notary Public, testified as follows:

Direct Examination

Mr. Neave:

DQ1. What is your full name?

A. Jesse Oscar Brandt.

DQ2. Your residence?

A. 809 High Street, Sharpsburg, Pennsylvania.

DQ3. Where are you presently employed?

A. Carnegie-Illinois Steel Corporation, Isabella Furnaces, Etna.

DQ4. I understand and I want you to tell me whether this is correct, that you have been employed by Carnegie



(Deposition of Jesse O. Brandt)

Steel Company or Carnegie-Illinois Steel Corporation since May, 1902, except for certain short periods of time. Is that correct?

A. I have been. If the plant was shut down in that period, we laid off at the time.

DQ5. Will you tell me what your work was with the company from 1905 on?

A. In 1905, I was in the blowing room, as well as I can remember, for two years, and from the blowing room to the power house for a number of years.

DQ6. Did you ever work in the Dry Blast Plant? [402] A. I did.

DQ7. When did you work there?

A. In 1909, I went in there as operator.

DQ8. Were you ever engineer in the plant?

A. I was engineer, yes, sir.

DQ9. At that time? A. Yes.

DQ10. Whom did you succeed?

A. William Swope.

DQ11. How long did you continue to be in the Dry Blast Plant?

A. Until they done away with it—dismantled it.

DQ12. Do you recall when that was?

A. As close as I remember around about 1921. We made ice after we discontinued the dry blast business. We still made ice. We ran one part of the engine.

DQ13. As part of the dry blast plant, it was discarded in 1921? A. Yes.

DQ14. Would you tell me what a Dry Blast Plant is?

A. It is a plant to take the moisture out of the air; used to dry air for blast furnaces. It consists of ammonia compressors and coil room—what we called the coil room



(Deposition of Jesse O. Brandt)

—Dry Blast Room they called it—and coolers, three brine coolers, two brine pumps, one water pump, 10-inch water pump, [403] one 16-inch fan, and I just mentioned condenser on top; Brine pumps (You got them down?), water pumps, 14 or 16 foot fan to blow air through, to pump atmosphere in from the outside to this Dry Blast Room.

DQ15. Would you describe to me the general operation of the Dry Blast Plant in 1909 and thereafter while you were engineer in charge of the plant?

A. General operation of it?

DQ16. Yes.

A. Well, I will start from the coil room. The object in the coil room was to keep the temperature down below freezing.

DQ17. These coils you are talking about, what kind of coils were they?

A. Two inch pipe coils. Circulating brine through them. This 16 foot fan blows up through the shaft up into the compartments and freezes the moisture out of the air.

DQ18. What did the brine do?

A. It would freeze the coils and make the air cold for blowing.

DQ19. Where did the air go?

A. Blowing engines pumped it out from a manifold on the top of the dry blast building.

DQ20. Where did the air go?

A. Into the blast furnaces. [404]

DQ21. Let us think about the refrigerator room for a moment. Was it all one big room or was it divided?

A. In my time, it was four compartments.

(Deposition of Jesse O. Brandt)

DQ22. Were there any entrances or exits to the compartments?      A. There was one entrance.

DQ23. Where was that?

A. Between the engine room and cooling room.

DQ24. How did the air get into these compartments?

A. This fan drove it through there.

DQ25. Where did it come in, at the top or bottom?

A. Bottom. Into the bottom and out of the top.

DQ26. What was the purpose of having four compartments?

A. Well, the purpose of four compartments was when they defrosted one they would shut it off separate and have three operating.

DQ27. What was it that was defrosted?

A. The 2 inch pipes.

DQ28. The brine pipes?      A. The brine pipes.

DQ29. They got covered with ice?      A. Yes.

DQ30. How was the ice defrosted?

A. With cold water spray, sprayed over the top of each coil. Each coil had a separate spray.

DQ31. And the spray came from some pipes over the brine [405] coils?

A. Yes, from the header pipe.

DQ32. Where did the water come from that was used to spray these brine pipes?

A. It came from this ammonia compressor tank—condenser upstairs, supply tank—and rapidly flowed down into this header.

DQ33. What was the water doing on the condenser?

A. It liquefied the condenser—the ammonia.

DQ34. That is, water was brought down from the condenser pipes?      A. Yes, sir.

(Deposition of Jesse O. Brandt)

DQ35. Where was that water collected?

A. In a pan.

DQ36. Underneath the condenser coils?

A. How do you mean?

DQ37. Was the pan underneath the condenser coils?

A. Yes.

DQ38. Then where did the water go from that pan?

A. We used some in a steam condenser on one end of the tank. What it did not take, we had an over-flow in the same tank and ran it in the sewer into the river.

DQ39. You mentioned a minute ago that water from the pan under the condenser went over to be used to defrost the brine pipes. [406] A. Yes, sir.

DQ40. Would you kindly trace in a general description the pipes that went from the pan over to the refrigerator building?

A. It came down, a 6 inch line came down, went into the tank, runs out along this dry blast building.

DQ41. Dry blast building?

A. Cooling building. Four headers, 4 branches up into each section of the cooling room.

DQ42. Is this header, this line you are speaking of outdoors?

A. Yes, between the power house building and cooling building. The feed line is in the engine room. Comes from a tank. The rest of the four headers were outside.

DQ43. How does the water get to the water sprays above the brine coils inside of the refrigerating building?

A. By gravity. Open the feed line in the engine room and one outside and gravity shoves it up there.

(Deposition of Jesse O. Brandt)

DQ44. So that the headers go up into the refrigerating room? A. Yes, sir, the feed lines.

DQ45. Now, how did you turn the water on when you wanted to defrost?

A. It was not my job to do that.

DQ46. Tell me first, as engineer of the Dry Blast Plant, were [407] you in charge of defrosting?

A. Yes, in charge of it, but I did not do it.

DQ47. Do you know how it was done?

A. I do, yes.

DQ48. Will you tell me?

A. You want the operation from start to finish?

DQ49. Yes.

A. The man in a vestibule, goes down into the cellar.

DQ50. In a refrigerating building?

A. In the refrigerating building, down into a 7 foot high cellar. He shuts the feed valve, brine feed valve which feeds these coils. Then he opens up his drain valve and it runs into a supply tank in the cellar. When it comes out of this one section of coils, then he shuts off one of the solid doors from the fan on that section.

DQ51. That is, the section that is being defrosted?

A. Yes.

DQ52. You defrost only one section at a time?

A. One a day. He shuts a solid door. He goes then into the refrigerating building, shuts 2 trap doors on the air manifold. That is to keep the water defrosted from going into the—sucking the water into the other compartments. Two trap doors on there. Then by the time he has done that his lines are about half empty and he goes down into the engine [408] room where they have a small brine pump. This brine pump takes this brine that

(Deposition of Jesse O. Brandt)

is emptied out of these coils, pumps it on the roof in a dead supply tank—suction tank we called it. Then he goes out on this outside business from the engine room, outside of the refrigerator room, opens his feed valve outside.

DQ53. Opens the feed valve for what?

A. For defrosting.

DQ54. For the water line? A. Yes.

DQ55. That lets water into the header?

A. Not yet. Then he goes on a little catwalk, then into the engine room, and opens the feed valve.

DQ56. Inside the engine room?

A. Inside the engine room. Water valve inside the engine room. That water valve in the engine room feeds this line in this section he is defrosting. That is all the operation he has to do until he has shut his down flow off. He goes in, looks at his coils a few times to see how they are and then he is done with that until they are done defrosting.

DQ57. How long did it take to defrost?

A. It all depended on the weather. How long that section would take depended on the weather naturally, around about  $1\frac{1}{2}$  hours in the Summer to  $1\frac{3}{4}$  hours. In the winter it would take a little longer naturally. [409]

DQ58. How cold was it in the defrosting room before the defrosting?

A. It was our duty to keep that below freezing all the time.

DQ59. That is, in the refrigerating room?

A. Yes, sir.

(Deposition of Jesse O. Brandt)

DQ60. During the defrosting period, how cool was it in the refrigerating compartment that was being defrosted?

A. That is something we never took any record of. The other compartments would be below freezing.

DQ61. After the compartment had been defrosted, what was the practice?

A. You mean the coil tender?

DQ62. Yes.

A. He would just re-trace his steps and refill that section again. Do you want me to say how it was done?

DQ63. Yes.

A. He would be in the engine room. He would go up this ladder in the engine room, shut his main water valve off. He would walk out on the platform, shut his other valve off—water valve.

DQ64. Where was that second water valve?

A. Outside of the building.

DQ65. On what pipe line?

A. On the section he was defrosting naturally. Then [410] there is a drain valve, 1 inch drain valve he would open.

DQ66 Where was that?

A. Outside on the water line right above the 6 inch gate valves, above the top gate valve. Now he would go down the outside in the engine room, on the ladder, would go in the freezing room, change his valves in there and let his brine fill up, let his brine fill up in there, open his doors in the top, open his solid doors in the cellar, and he was ready for use of that section again.

(Deposition of Jesse O. Brandt)

DQ67. What was the purpose of opening the doors?

A. Let the air back in that compartment he defrosted. Let it in and let it out on the top.

DQ68. What was the temperature of the water that was used for defrosting?

A. I would say average temperature would be about 50 or 55 degrees.

DQ69. Where did that water come from that was used?

A. We would pump it out our own pumping station, from the river, pump it up in our supply tank lines running all through—running from the bottom of our plant under ground to different departments of the plant, just like a city water line.

DQ70. I show you Plaintiff's Exhibit No. 1 and ask you if you recognize it.

A. I do. There is one difference here. [411]

DQ71. Referring to Plaintiff's Exhibit #1, on the left hand side of the sheet we have a figure, what does that represent?

A. That is the freezing room.

DQ72. At the Dry Blast Plant of the Isabella Furnaces?

A. Isabella Furnaces, yes, sir.

DQ73. In the center of the figure, I see a lot of snaky lines. What are those?

A. Those coils.

DQ74. Those are the brine coils?

A. Brine coils.

DQ75. Cooling coils?

A. Yes, sir.

DQ76. On the left of that left hand figure, there is a round pipe which is marked 6 inch water main. What was that water main?

A. That was for defrosting your cooling coils.



(Deposition of Jesse O. Brandt)

DQ77. Where did that water main come from?

A. Main supply came from the engine room condenser tank. We called it a tank. It was a pan under the condenser.

DQ78. That was quite a large tank?

A. Yes, sir.

DQ79. How big?

A. Eighty feet long and 18 feet wide and  $1\frac{1}{2}$  or 2 feet deep. [412]

DQ80. I see a pipe extending vertically and this is marked 6 inch pipe. What was that pipe?

A. That went up into the building to feed your thawing off, to feed water into your coils for defrosting.

DQ81. How many such pipes were there that went up into the refrigerating room?      A. Four.

DQ82. Four pipes led off this main?

A. Yes, 4.

DQ83. Why were there 4?

A. One for each compartment, 4 compartments.

DQ84. Now, is there anything shown on this drawing of how the water comes up over the brine coils?

A. How it comes up there?

DQ85. Yes.

A. It comes down through the tank into this supply line here; gravity forces, shoves it over the top into a header on that one section in through a spray or perforated pipe. That is the way.

DQ86. What is the size of the perforated spray pipe?

A. One and one-half inch.

(Deposition of Jesse O. Brandt)

DQ87. Now as we have seen the pipe layout on this drawing, does that represent the way the pipe layout was when you were there in 1909?

A. The water pipe drawing? [413]

DQ88. Yes. A. Yes.

DQ89. I see here on the vertical piping on the left hand side of the left hand figure the writing says, "1 inch drain valve", which is just above the 6 inch gate valve. Was there such a drain valve on each of the four pipes going up into the refrigerating room?

A. Yes. Four, one on each.

DQ90. What was the purpose of that drain valve?

A. For draining water out of your feed line for defrosting.

DQ91. Was there any other drain valve on this water pipe?

A. Yes, sir, one out on the end of the feed line, horizontal line, one on the end of the line.

Mr. Lyon: Which end?

A. Dead end of the line. A blind head with a 1 inch valve put on it.

DQ92. When you are talking about the line, do you mean the headerpipe line running on the outside of the refrigerating building from which the four pipes extended vertically into the refrigerating building?

A. Yes, sir. On the end of that line, a 1 inch valve.

DQ93. When the water was brought down over the brine coils, what happened to it at the bottom of the refrigerator room? [414]

A. What happened to the water?

(Deposition of Jesse O. Brandt)

DQ94. Yes.

A. It went down into the cellar, ran into a sewer into the cooling room well in the next building where our water pump was and we pumped it back up over the coils again.

DQ95. Will you state whether or not there was any change in the water defrosting structure as you have described it during the period when you were there from 1909 to whenever the Dry Blast Plant closed in 1920 or 1921?

A. From my time until they finished there was never no change. As it was, it was until they tore it down.

DQ96. Do you know why Dry Blast was given up?

A. I do not. I could not say that.

DQ97. Do you know whether the water defrosting was satisfactory?

Mr. Lyon: Objected to as calling for a conclusion of the witness. State what it does.

I think that was your statement?

Mr. Neave: Probably.

A. It cleaned the coils off. It defrosted. It really was.

DQ98. Did you have any trouble with the water freezing in any of the pipes? A. In my times, no.

DQ99. Have you made any model of the water defrosting system [415] as you have described it here?

A. I have.

DQ100. Would you be so good as to produce it?

A. I will.

DQ101. Mr. Brandt, this model which you have produced, did you make this? A. I did.

DQ102. Now, in order to orientate ourselves, I see that on the model you have a ladder which goes up to a door and on the other side of the door is a catwalk which

(Deposition of Jesse O. Brandt)

you have referred to in your testimony. Is the catwalk and the whole side of the model along which the catwalk runs inside or outdoors?      A. Outdoors.

DQ103. And is the ladder indoors or outdoors?

A. Indoors.

DQ104. In what portion of the building is that ladder situated, what room?

A. In the engine room, near the engine room.

DQ105. Now, will you please describe that portion of the model which is in the engine room, i. e., on the same side of the wall as the ladder?

A. This section here, these coils are all in the engine room.

DQ106. What are the coils that are at the top? [416]

A. Ammonia compressor coils, condenser coils, and over the top of the ammonia condenser coils is a pipe.

DQ107. What is that pipe for?

A. Water feed line liquefying this ammonia gas.

DQ108. Actually the coils?

A. Yes for liquefying this ammonia gas.

DQ109. And underneath the condenser coils is a tank. What is that for?

A. It is for water. To collect the water from the condenser and also for defrosting use.

DQ110. Out of that tank you have a pipe leading down to a valve and then the pipe goes out through the engine room walls, outdoors adjacent to the catwalk. What is the valve in that pipe?

A. That is for defrosting purposes, use water for defrosting.

(Deposition of Jesse O. Brandt)

DQ111. When would the operator open that valve?

A. After he went through his procedure in the cooling room.

DQ112. What was the purpose of opening the valve?

A. To let water up in and defrost this section.

DQ113. Let us go outdoors and along the catwalk. I see that on the model there is a header pipe along the catwalk from which four pipes rise and go through the wall of the refrigerator room. Is that correct? [417]

A. That is correct.

DQ114 Will you describe the various valves that are situated on each of those? A. Outside?

DQ115. Outside.

A. Six inch valve leading up in from the inside on the header—6 inch valve leading up to the top goes into a header inside the building. That is for feed water in there for defrosting purposes.

DQ116. On your model that is represented by the brass valve? A. Brass valve, yes, sir.

DQ117. What is the little red thing above?

A. That is a drain valve; represents a drain valve. That is the reason I painted that red. Represents a drain valve.

DQ118. Is there one such drain valve on each of the risers from the header? A. There is.

DQ119. What is the red thing on the end of the header?

A. Also a drain valve.

DQ120. Are those the drain valves to which you referred in your previous testimony? A. They are.

(Deposition of Jesse O. Brandt)

DQ121. In your model, on the roof of the refrigerator [418] building, there is a pipe. What is that pipe?

A. Air manifold.

DQ122. Where was this air taken through this manifold?

A. The blowing engines pumped it out of there and from there into the blast furnace.

DQ123. I find that the roof of this model is removable and in opening it up, I find that there are certain gates. What are they for?

A. For shutting off air in the compartment they are defrosting.

DQ124. Was there only one such gate?

A. There were four, one for each compartment.

DQ125. Was there means for keeping the gate closed?

A. There was. Rods went through with wedges put in them, steel rods.

DQ126. When was this gate kept closed?

A. While they were defrosting.

DQ127. Looking down through the open top of the refrigerator room, would you be good enough to describe what you have shown in the model in one of the four compartments?

A. I have a header line in there, 6 inch header line.

DQ128. For water?

A. Water for defrosting purposes. Two coils representing brine coils. Two water feed lines coming off the header for defrosting. [419]

DQ129. Where are those water feed lines?

A. The 6 inch header inside the building.

DQ130. Above the coils?                      A. Above the coils.

(Deposition of Jesse O. Brandt)

DQ131. Your model shows only one such header, and one set of coils and one set of two spray pipes. Was there more than one section to the refrigerator building?

A. There were. There were four.

DQ132. Were they all identical.

A. They were all identical.

DQ133. Were they like the construction you have shown in your model?

A. As close as I can give it to you, the same as the model.

DQ134. Would you please trace on the model how the air was introduced into the refrigerator building and how the air left the building?

A. I could give you a little demonstration. Over in here, there was a building down in here with a roof on it.

DQ135. Below the catwalk?

A. Yes, probably 3 feet below. Sixteen inch fan, 14 or 16 inch air fan. Lattice work in part of the roof out here to collect atmosphere from out in here.

DQ136. Sixteen inch or 16 foot?

A. Sixteen foot. Sixteen foot fan, it collected the air [420] here, drove it down through a shaft in the cooling cellar and when this fellow defrosted that is where he closed this solid door to shut the air off the compartment he was defrosting. Three solid doors open on the compartments that were in use. The fan drove it up through here up through these compartments and the blowing engines pumped it into the blast furnace.

DQ137. And the air was pumped through the compartments of the refrigerator room? A. Yes, sir.

DQ138. And then up into the blast furnace?

A. Yes, into the blast furnace.



(Deposition of Jesse O. Brandt)

Mr. Neave: Will you please mark this model Plaintiff's Exhibit #10?

DQ139. Mr. Brandt, do you recall whether there were more than two coils, brine coils in each compartment and more than two perforated water sprays?

A. There were more than two.

DQ140. There were more than two?

A. My recollection is there were 16 coils.

DQ141. You have just shown two.

A. I have just shown two in my model.

DQ142. Is the refrigerator building still standing?

A. The building is still standing, yes, sir.

DQ143. Is there any of this equipment in the building?

A. Nothing whatever.

DQ144. I show you a photograph of the outside of a [421] building and ask you whether you recognize it.

A. I do. It is the outside of this model right here.

DQ145. It is the outside of the refrigerator building?

A. Yes, sir.

DQ146. At the Isabella Furnaces?

A. Yes, sir, it is.

DQ147. On the left hand side of the picture, I see an opening in a wall. Can you identify that opening?

A. That is the opening for the catwalk right here. This door was right here.

DQ148. That is the doorway that leads—

A. That leads out on the catwalk.

DQ149. From where?

A. From the engine room to the catwalk.

(Deposition of Jesse O. Brandt)

DQ150. I see on the wall what look like metal prongs coming out. What are they?

A. They could have been the pipe header line, 6 inch pipe going in to the building.

DQ151. Were they on that level?

A. No. They were higher. I am wrong. They were higher than that.

DQ152. Can you find the place where the header lines went in? A. Yes, I can.

DQ153. How many are there? [422]      A. Four.

DQ154. Those are dark places?

A. Yes. Six inch header line.

DQ155. This is a correct reproduction of the condition of the outside of the refrigerator building as it is now?

A. Yes, sir.

The Court: You say that is Exhibit 11?

Mr. Neave: It hasn't been marked as yet, your Honor. It is Exhibit 11, your Honor.

The Court: The witness said he could find four holes. I see only one hole in the wall.

(Conference between counsel.)

The Court: We will have a short recess.

(Short recess.) [423]

### Cross Examination

Mr. Lyon:

CQ1. Mr. Brandt, you are now employed by Carnegie Steel Company, are you?

A. Yes, sir.

(Deposition of Jesse O. Brandt)

CQ2. In collecting this evidence and making this model that you have here produced and explained, identified as Plaintiff's Exhibit #10, for whom are you working?

A. Carnegie-Illinois Steel Corporation.

CQ3. Did anybody pay you for making that model?

A. No, sir.

CQ4. Did Carnegie-Illinois Steel direct you to make that?

A. No, sir. I made it myself on my own hook.

CQ5. Nobody directed you?

A. Nobody directed me.

CQ6. Nobody requested you?

A. Nobody requested me.

CQ7. In giving your testimony here, have you been paid or promised remuneration for it?

A. I have not been paid a penny for it.

CQ8. How long has it been since you saw this operation of this blower house which is now dismantled?

A. This concern here?

CQ9. Yes. A. In operation? [424]

CQ10. Yes. A. About 1918.

CQ11. You have had no occasion to refer to it between this investigation and the time you last saw it in 1918?

A. No, sir.

CQ12. From what did you make this model, Plaintiff's Exhibit #10?

A. How do you mean, from what did I make it?

CQ13. Yes.

A. I don't quite get you.

(Deposition of Jesse O. Brandt)

CQ14 Did you make it from memory or from drawings?

A. Out of my mind. Had no blue prints. I really don't know how to read them right. Couldn't make it if I had a blue print.

CQ15. You can't read blue prints?

A. Not so well.

CQ16. How long after Mr. McCarthy first approached you was it that you made this model?

A. How long?

CQ17. Yes.

A. I started this model—when I really first had it in mind, my foreman, Bruce Walter, out at the plant—he is dead now, told me there would be some kind of a concern like this come up. I had it in mind then. I made it about two weeks ago. [425]

CQ18. How long after Mr. McCarthy called on you?

A. About a week or more probably.

CQ19. Mr. McCarthy, as you understood, was an investigator employed by the York Company?

A. I do not know who he was employed by. He was up at our office and I was called up to the office and saw him. He asked me about different men who worked at the plant, where he could find them, their names. That is all I had to do with Mr. McCarthy.

CQ20. He didn't discuss, that you recall, what he was looking for?

A. He talked about Dry Blast business, about defrosting, who the men was that defrosted. I told him his name, Harry Haney, Henry Hartman, different men who worked in the plant.

(Deposition of Jesse O. Brandt)

CQ21. You have testified, I believe, according to this model and this installation, that you recall that on this water line, which is the silver water line just opposite what you have referred to as the catwalk that there is at the end of that line a vent valve which you say is marked in red.

A. Drain valve, yes, sir.

CQ22. That line is located out in the atmosphere?

A. In the open, yes, sir.

CQ23. And if there was not a provision made for draining that line and water was maintained in it during the Winter months, that line would freeze? [426]

A. That was covered with an asbestos cover.

CQ24. As a matter of safety, as in all outside pipes in this territory in freezing weather, you would open that drain valve to drain the line so water would not freeze inside of it?

A. Yes, sir.

CQ25. Leading up from that pipe, which we have just identified and which is the silver colored pipe opposite the catwalk, are four vertical pipes?

A. Yes, sir.

CQ26. And those extend beyond the valves that are in them up outside of the wall for a distance before they enter the inside of the room?

A. Yes, sir.

CQ27. And for the same reason, to prevent freezing of those pipes in freezing weather, it would be necessary to drain them, would it not?

A. Yes, sir.

CQ28. And that is the purpose of the drain valves which you have marked in red?

A. Either here or here, either place.

CQ29. And the purpose was to keep the pipes from freezing during freezing weather?

A. Yes, sir.

(Deposition of Jesse O. Brandt)

CQ30. Now, Mr. Brandt, do you understand what the purpose of this operation of blowing the air over these coils was? [427]

A. Yes, sir.

CQ31. It was to remove—

A. It was to remove moisture out of the air.

CQ32. And to remove the moisture out of the air, it is only necessary to reduce the temperature of that air to a point where it is below the dew point of the air entering the system? A. Below freezing.

CQ33. Below the dew point?

A. Below the dew point.

CQ34. It isn't necessary to go below freezing?

The Court: What was the last answer? "Below the dew point" and not below freezing?

Mr. O'Hearn: The last answer was, "Below the dew point."

The Court: Well, go ahead.

CQ34. It isn't necessary to go below freezing?

A. We went below freezing. It would some times probably.

CQ35. Sometimes you went below freezing?

A. Sometimes we went below freezing, yes.

CQ36. Did you ever measure or are there any figures available showing the temperature of the air passing through this silver collector pipe or stack pipe which is at the top of this model and which is connected with the four vertical conduits which lead to the respective cooling chambers?

A. We took cyclimatical readings with this pipe coming [428] from here down in there and put our wet and dry thermometers down in the engine room.

(Deposition of Jesse O. Brandt)

CQ37. Did you ever take temperature readings of the discharged air?

A. No, only in the engine room.

CQ38. Never took it up here? A. No, sir.

CQ39. You have no figures then which show the temperature of the air discharged from these cooling chambers? A. No, sir.

CQ40. Did you ever take the temperature at any time during the operation of the spray header pipes?

A. No, sir.

CQ41. Don't know what that was?

A. Never took that temperature.

CQ42. Don't know whether it was above or below freezing?

A. It would be above freezing always.

CQ43. It would be above freezing?

A. Normal river water degrees most of the time.

Mr. Neave: That is the temperature of the water?

A. Yes. Water.

CQ44. That would be above freezing at all times?

A. Yes, sir.

CQ45. In this construction, isn't it true that from the outlet which connects with this black "L" right across through [429] the spray header pipes the entire system was on a level?

A. No. It was elevated so it would drain.

CQ46. Elevated which way?

A. Toward the outside of the building.

CQ47. You can't read the drawings, can you?

A. Well, not so well.



(Deposition of Jesse O. Brandt)

CQ48. I will ask you to refer to the drawing, Plaintiff's Exhibit #1, and tell me if the drawing, Plaintiff's Exhibit #1, is in error in that respect. In the drawing, I believe, that the pipe which is indicated as "Water Spray 2 inch Pipe" is shown as a horizontal pipe. Is your testimony that the drawing is in error in that respect?

A. Well, it could be elevated a little. It was just set on brackets or racks up in there and could be moved so the water would run down. There is perforated holes in there.

CQ49. The pipe however in this drawing, as you see it, is shown horizontal? A. Yes.

CQ50. And as far as you know, the installation was made as that drawing indicates. Isn't that correct?

A. You asked me if that was correct?

CQ51. Yes. A. It is correct.

CQ52. You never got up there and measured that pipe or changed its condition of elevation yourself? [430]

A. We renewed some of the pipe in there.

CQ53. You never changed it or changed the position of the brackets? A. No.

CQ54. You renewed some of them, some of the defrosting pipes? A. Yes.

CQ55. And if you wanted to know whether they were level or not, the only way would be to put a level on?

A. We never done that. It wasn't necessary.

CQ56. Mr. Brandt, you stated that on an average it took 1-1/2 hours to defrost these coils in each chamber. Is that correct?

A. Sometimes longer and sometimes sooner. All depends on the weather. I couldn't give you a definite answer. All depends on weather conditions.

(Deposition of Jesse O. Brandt)

CQ57. Just what was the average time that you can fix?

A. 1-1/2 hours; 1-3/4 hours in the summer time.

CQ58. In the Summer time, about 1-3/4 hours?

A. Yes.

CQ59. And in the Winter correspondingly longer?

A. Yes, sir.

CQ60. As I understand, the water was taken from the drip pan underneath the ammonia coils, passed down through the turn through this valve which is immediately under the drip pan, [431] down across this horizontal header and up through the vertical pipe which led to the coils which you wanted to defrost.

A. Yes, sir.

CQ61. That water was then sprayed out over the coils?

A. Yes, sir.

CQ62. And passed down into a sump in the floor?

A. In the cellar.

CQ63. And that sump was connected with the circulation pipe?

A. The sewer in the cellar was connected with a well we had on the outside of this defrosting machine cooling room.

CQ64. I think you testified there was a circulation pipe?

A. Running into the outside of the building. This well connects on the outside of our refrigerator room—on the cellar outside.

(Deposition of Jesse O. Brandt)

CQ65. But that water was not pumped back that pump to pass through this spray header?

A. Yes, sir. Pumped through here and up into this tank and used over again. What we did not use went into the sewer in the river.

CQ66. But this was a closed circulation system in that the water which was once sprayed over these pipes was re-circulated back through the tanks and up into this drain pipe?

A. Yes, sir. Back through and down and back over the coils. The surplus went into the sewer. [432]

CQ67. The surplus went into the sewer?

A. Yes, sir.

CQ68. Same water was re-circulated?

A. Yes, with fresh river water mixed in with that.

CQ69. Some additional fresh water and some of the same water?

A. Yes, from the frost melting off.

CQ70. That is, surplus water came from the amount of frost that was developed and thawed off and that surplus water went down into the sewer?

A. Mixed in with the fresh river water. The river supply was going through there continuously, all the time, regardless of thawing off or no thawing off, defrosting.

CQ71. Let us get this one part; that water which was coming into that drain pan went over the coils and was collected after it went over the coils?—

A. Yes.

(Deposition of Jesse O. Brandt)

CQ72. Together with the amount of water which resulted from the melting of the frost, the excess of that water over and above what was required was drained into the river.

A. Into the overflow into the river.

CQ73. That water that was in the basement was pumped back over the ammonia coils? A. Yes, sir.

CQ74. Drained into the drain pipe and went back through the [433] same cycle?

A. Some of it. Some went out mixed in with the river water,

CQ75. Where did the river water come from?

A. Our own pumping station.

CQ76. Where did the river water enter?

A. Under the ground, through here, into the well.

CQ77. Into this sump? A. Yes, sir.

CQ78. And this sump also was connected with the source of water from the river? A. Yes, sir.

CQ79. So that this sump collected water both after it passed over the coils and also from the river?

A. From our supply tank.

CQ80. Now, in this operation and before the water was turned on to go over these pipes, I understand your testimony to be that there were several things done, including the shutting off of the air circulation through it.

A. Yes, sir.

CQ81. The draining of the brine from the coils down into, I believe if you look at the drawing, into the brine storage tank in the cellar? A. Yes, sir.

(Deposition of Jesse O. Brandt)

CQ82. The water, as you testified, left these spray header [434] pipe at about 50° to 55° Fahrenheit?

A. I did not say after it left the coils.

CQ83. After it left the spray pipes—

A. Yes, sir.

CQ84. —it was about 50° to 55° Fahrenheit?

A. Average, yes.

CQ85. There was a practically solid stack of coils in each of these four chambers or compartments. Is that correct?

A. Yes, sir.

CQ86. In fact, there was just enough room in there for air to get through?

A. Yes, sir.

CQ87. Otherwise, it was just packed with coils?

A. It was packed with coils, 2 inch pipe.

CQ88. And, as you recollect, there were instead of 2 coils in that chamber, as you have in this model, Plaintiff's Exhibit #10, there were 16?

A. I would judge 16 to 18 coils.

CQ89. Sixteen to 18 coils?

A. Yes, sir.

CQ90. How high was that chamber?

A. I could not really tell you. If it was four stories, I would say about 35 feet high.

CQ91. About 35 feet?

A. Yes. [435]

CQ92. How closely were those coils together horizontally?

A. I would say  $\frac{3}{4}$  inch.

CQ93. That is, the clearance space between the outside of the pipes was  $\frac{3}{4}$  inch?

A. Three-quarters of an inch.

(Deposition of Jesse O. Brandt)

CQ94. How close were they together arranged in their vertical tiers?

A. About three quarters to one inch. The elbows would take some of that pipe—about  $\frac{3}{4}$  inch; set in on brackets and arranged for that.

CQ95. During this defrosting operation that you state was performed here, did you ever take the temperature of the air within that compartment during defrosting?

A. No, sir.

CQ96. Did you ever take the temperature of the air in that chamber at the end of the defrosting operation?

A. No, sir, not until after it was probably a half hour after when time came for taking readings. If it was on the hour we took it but we did not take it except on the hour.

CQ97. Isn't it a fact, Mr. Brandt, that before you started the air to re-circulate through a compartment after you would defrost the coils in that compartment that you allowed a period of time to elapse after you started that brine recirculating before you opened the air valves to let the air in and out of that chamber? [436]

A. Yes, we did. By the time that man did his duty outside there there would be time enough for him to open the air ducts in the top here.

CQ98. About how long was the time that elapsed between the starting of re-circulation of the brine to the cooling coils before these two valves were opened that is to let the air in at the bottom and out at the top?

A. I would say about 15 to 20 minutes, all depending on how fast the man traveled who was doing the job.

CQ99. There wasn't any specific time? A. No.

(Deposition of Jesse O. Brandt)

CQ100. You didn't wait and take a reading of the temperature of the air in this chamber before you opened the air valves?

A. Not unless it was time to take readings on the hour.

CQ101. Unless it happened to come at the time you were taking the readings on the hour?

A. We took readings every hour to figure this moisture out.

CQ102. Do you have any figures or are any figures in the files of Carnegie-Illinois Steel which show the amount of water removed from the air by that operation?

A. I think they lost them in the 1936 flood. I would not have any in our engine room department and they do not have any in the office.

CQ103. You don't know what proportion of the water was [437] removed from the air passing through this cooling cycle?

A. No. It was so long since I have taken any readings of that.

CQ104. Just one other point here, Mr. Brandt, I believe on the outside of the building immediately underneath the spray pan there is also indicated a drain. Is that right?

A. Emergency steam line.

CQ105. Emergency steam line? A. Yes, sir.

CQ106. That was put on there in case that pipe froze up from failure to drain?

A. Emergency to clean out. We could clean out with that any time. It never froze up.



(Deposition of Jesse O. Brandt)

CQ107. That steam pipe was there for two purposes, one to clean out the line, and the other to thaw it out in the event it became frozen?

A. You could use it for three purposes, maybe more, whatever purpose you chose.

CQ108. What was the other purpose?

A. You could blow out your line either way. You could clean out your line. If the line froze up, you could thaw it out. You could hasten your defrosting business with it if you cared to.

CQ109. That is, you could enter steam in there to speed defrosting? [438]

A. Speed defrosting if so desired.

CQ110. Did you ever see anybody do that?

A. No.

CQ111. Did you ever conduct defrosting operations yourself? A. No. It was not my duty.

CQ112. Did you ever watch the complete operation?

A. No, not the complete operation.

CQ113. Then you don't actually know of your own knowledge whether the operator actually entered steam—

A. I could see from the engine room. I could see that. My duty was in the inside of the engine room.

CQ114. You testified they never used steam in that way?

A. Not to my knowledge, they never did, that I saw.

CQ115. That was one of the purposes for which the steam line was provided?

A. Provided for thawing if it froze up.

(Deposition of Jesse O. Brandt)

Redirect Examination

Mr. Neave:

RDQ1. Mr. Brandt, when you opened the drain on the uprights above the water valve which are on the outside of the building just above the catwalk, what was drained by that drain, what portions of the pipe?

Mr. Lyon: I will have to object to that on the ground that the witness is not qualified. He said he never saw the operation. [439]

The Court: Overruled.

Mr. Neave:

RDQ2. Will you tell me whether you had under your direction and supervision the operators who conducted the defrosting?

A. To a certain extent, yes.

RDQ3. As far as defrosting is concerned, they were in your department?

A. They were in my department, yes, sir.

RDQ4. Did you observe any defrosting man doing the draining operation?

A. Not all through the course, no.

RDQ5. Did you ever observe any man operating the drains on these upright headers?

A. I could see them operating them from the engine room. I could see these two front ones from the engine room.

RDQ6. What did that drain?

A. Drained your defrosting pipe. The pipe inside.

RDQ7. The pipe inside the refrigerator compartment?

A. Refrigerator compartment, yes, sir.

(Deposition of Jesse O. Brandt)

RDQ8. While you were on the Dry Blast Plant, did you know of any instance when the water pipes inside of the refrigerating room were frozen?

A. Never. [440]

Recross Examination

My Lyon:

RCQ1. Did you ever personally, Mr. Brandt, inspect the header pipes, spray pipes over the coils to find out whether they were drained of water?

A. Never did. That was up to the coil tender.

(Thereupon a portion of the deposition of William Swope was read, whereupon the following proceedings were had:)

The Court: Just a minute. Is this testimony just cumulative of what the previous man testified to?

Mr. Neave: Yes, sir.

The Court: Or is there anything new about temperature?

Mr. Neave: No, nothing new about temperature.

The Court: His testimony is merely corroborative?

Mr. Neave: Corroborative.

Mr Lewis Lyon: Except that it does not corroborate it in many respects. One of the most material reasons is the drain valve. You will recall that the first witness said you could sit in the steam room and see the man operate it, and the next witness now comes along and on cross examination says that there was a double door there and you could not possibly see through the door from the steam room. There are other differences.

The Court: All right. What I was trying to do was to save the reading of the deposition if all that this other [441] witness had to offer was corroborative, because at this time I think I understand the model without having each witness go over it and explain all the valves, and so forth.

Is there anything in it that is other than cumulative or corroborative?

Mr. Neave: Not so far as I am concerned.

Mr. Lewis Lyon: The only thing that is material—

The Court: Of course, it is your law suit. You can offer it, if you want to, but there is no use in just being repetitive here.

Mr. Neave: No, I don't care anything about offering it, so far as that is concerned.

The Court: All right. Does Mr. Lyon want to offer it?

Mr. Lewis Lyon: There are several things. Mr Neave, if I could have a stipulation to this effect, we probably could avoid it and I think the record would show it, that this chamber was divided into four parts, and the additional testimony of the witnesses established that when—

The Court: You mean this witness?

Mr. Lewis Lyon: These witnesses here that he is not going to use, as I understand, any of them.

The Court: Are there more?

Mr. Neave: There are several other witnesses.

The Court: There are several other witnesses on the Pittsburgh matter? [442]

Mr. Neave: That is right.

Mr. Lewis Lyon: That is right.

The Court: And they are all cumulative?

Mr. Neave: No, some of them, and some different.

The Court: Is there any one who will testify as to what the temperature of the room was, or at which it had to be maintained?

Mr. Lewis Lyon: No.

Mr. Neave: What they testified to was that it was below freezing. They didn't have any charts.

The Court: One man said it wasn't below freezing. This man said it was when he was in there, and the previous witness testified they never maintained it below freezing.

Mr. Neave: No, sir, the previous witness I think said it was below freezing.

The Court: That it was below the dew point.

Mr. Neave: He said that, and that it was below freezing.

The Court: I was watching that part of his testimony particularly, and as I remember, the question was asked again and he said it was above.

Mr. Neave: You are referring to Mr. Brandt's testimony?

The Court: Yes, Brandt. Well, maybe we cannot save any time, but I just thought we could.

Mr. Neave: I am perfectly willing not to offer Mr Swope's deposition. [443]

The Court: Anything that is just cumulative here, I can't see any necessity of going over and over it again.

Mr. Neave: I will withdraw Mr. Swope's deposition, your Honor.

The Court: All right. Let's go to the next.

Mr. Lewis Lyon: Wait just a minute. I just want to look at this here. The direct examination has been read, without the cross examination.

Mr. Neave: I am withdrawing it.

Mr. Lewis Lyon: Also, it leaves out the entire discrepancy in the witness' testimony which has already been read in the record.

The Court: He is withdrawing it. He has moved that it be withdrawn.

Mr. Neave: Be stricken, because Mr. Brandt testified on direct.

Mr. O'Hearn: Page 28, Mr. Neave.

Mr. Neave: Page 28, is it?

Mr. O'Hearn: About half way down.

Mr. Lewis Lyon: At page 45, on cross examination, your Honor, is the testimony you referred to.

The Court: Is that what I thought it was?

Mr. Lewis Lyon: Yes.

The Court: That it was below the dew point, but it was above freezing. On direct he said it was below freezing. [444]

Mr. Neave: That is right.

The Court: But on his cross examination he said it was below dew point and never below freezing.

Mr. Neave: Let's go back to just what the testimony was.

Mr. Lewis Lyon: He said maybe sometimes it went below freezing, on his cross examination, but it was not necessary.

Mr. Neave: He said sometimes. On direct he said it was below freezing and on cross he said sometimes below freezing.

The Court: But I got the general impression from the reading that in order to get an efficient operation they had to have it below dew point.

Mr. Neave: I think the testimony will show it was below freezing, before we get through.

Mr. Lewis Lyon: I don't. Furthermore, there is no testimony of any kind as to the temperature in the chamber, in the isolated chamber, during defrosting.

The Court: It isn't in yet. We can argue that when we get to it. But my point in raising it now was to see whether any of the other witnesses regarding the Pittsburgh operation could give some new evidence rather than just repetition, rather than have you be just reading: Is this the valve here, or there.

Mr. Neave: I withdraw Mr. Swope's deposition.

The Court: All right. Your motion to withdraw it is granted and the reporter need not write it up. [445]

Mr. Neave: What I can do, if your Honor please, is to go over some of the remaining Pittsburgh depositions, if your Honor is going to adjourn in a few minutes—

The Court: I would like to press ahead.

Mr. Neave: Then I think we had better continue to read the next deposition.

The Court: Unless you think you could save time by our adjourning now?

Mr. Neave: What I was going to suggest—I am not interrupting you?

The Court: No; go ahead.

Mr. Neave: We have to have some repetition testimony for corroboration. It may not be necessary to read that, your Honor. We could offer it and have the reporter copy it without reading it to your Honor, but I am not prepared to say at the moment which of those depositions I would just offer rather than have read.

The Court: I see.

Mr. Neave: And if you wanted to adjourn now this afternoon, I could go over them and maybe save two or three depositions.



The Court: That might be true, or you might save a lot of questions and answers in other depositions, such as the Swope deposition. I suppose there was some testimony in there concerning the temperature, but just to ask the same questions to [446] witness after witness, and I know when you are examining witnesses you can't help it, but it does take time to have somebody sit down and explain this thing over and over again.

Mr. Neave: Yes. Of course, one of the things about prior use is that we have to be careful to have corroborative testimony.

The Court: To have what?

Mr. Neave: To have corroborative testimony where it can be obtained. So I want to have the privilege of putting that in, even though it may be repetition, but some of it might not have to be read to your Honor but just go into the record.

The Court: I think that maybe might save some time. That is, you might introduce, instead of whole depositions, just pages so-and-so, say, the following lines and the following testimony, and then if it is material or if the other side wants to introduce anything further for any purpose, why, we can settle that at that time.

Mr. Lewis Lyon: I don't think that will save any time, your Honor, because we don't know in advance what he is going to pick out.

The Court: You don't think it would save any time?

Mr. Lewis Lyon: I don't think it would. Either he should offer the entire deposition, and it will be deemed to

be read, or should read them. I don't think a piecemeal proposition is going to save anything, unless there are certain depositions [447] they don't want to offer at all.

Mr. Neave: I think, your Honor, we would want to either read to your Honor the deposition or offer it, or not offer it at all, one of those three things, and I will be very glad to decide which, if I can.

Mr. Lewis Lyon: That might save some time, if you want to throw some out.

The Court: Everything that you have read in Swope's deposition is just a matter of asking him about this model here.

Mr. Neave: That is right.

The Court: And about what the position was before. One witness testifying to a fact is sufficient to prove it, if he is worthy of credence, and I can't see that it would make any difference, but if you think some time can be saved by that, we will recess now. Otherwise we will continue until 5:00 o'clock.

Mr. Neave: I think some time can be saved. I will go over it tonight.

The Court: Then we will recess until 10:00 o'clock tomorrow morning.

(Whereupon, at 4:30 o'clock p. m., Thursday, September 19, 1946, an adjournment was taken until Friday, September 20, 1946., at 10:00 o'clock a. m.) [448]

Los Angeles, California; September 20, 1946; 10:00 o'clock a. m.

The Court: Ex parte?

The Clerk: No ex parte, your Honor. Further trial.

The Court: Proceed.

Mr. Neave: May it please the court, the next witness called was Edward G. Kennedy. I would like to offer the direct examination of Mr. Kennedy, and I will, with the court's permission, not read it but summarize it.

Mr. Lewis Lyon: Your Honor, I do not think that that proposition is agreeable.

The Court: Let me see the deposition so I can see what you are talking about.

(The deposition referred to was passed to the court.)

The Court: Is there any question in your mind but what his name was Edward George Kennedy?

Mr. Lewis Lyon: No, your Honor.

The Court: Or that he lived at 13 Wible Street, Etna, Pennsylvania?

Mr. Lewis Lyon: No.

The Court: And that he worked for the Carnegie Steel Company from 1893 to December 1915?

Mr. Lewis Lyon: No.

The Court: That he worked in the dry blast plant?

Mr. Lewis Lyon: No. [451]

The Court: Why cannot counsel just make those preliminary statements and come down to the questions and answers that are material?

Mr. Lewis Lyon: I didn't think that that was his purpose; that he was going to summarize the whole deposition in the form of argument. That is what I was objecting to, your Honor.

The Court: I did not so understand it.

Mr. Neave: My proposal was that I thought, in line with your Honor's suggestion yesterday, that this deposition be copied into the record by the reporter and that instead of reading it to your Honor to save time I would not argue it but simply state what the general contents of the deposition were.

The Court: All right. Here on two pages I have read everything down to that they had a dry blast plant, that they had compressors, that they had two 225-ton York machines and that they used ammonia and they had an explosion and then they turned around and put in a brine system.

What in your mind, counsel, did this witness prove?

Mr. Neave: This witness proved that during the years when he was working at the plant in 1905 he started running the dry blast plant there. He then operated it and knew how the plant operated.

He testified about the system of piping. [452]

The Court: Which is a repetition of this.

Mr. Neave: It is corroboration of that, your Honor, and that is why I am suggesting that it not be read but it has to be in the record.

Mr. Lewis Lyon: I have no objection, your Honor, to that procedure except to the proposition of arguing it.

Mr. Neave: I am not going to argue it, I am just trying to tell your Honor what it is all about.

The Court: All right.

Mr. Neave: He then stated on page 78, Question 32:

"DQ32. What was the temperature of the cooling room before you started defrosting?

"A I could not tell you. That was way under freezing, way under freezing, when you started to defrost.

“DQ33. Did you ever go into the cooling room?

“A. Yes.

“DQ34. Was it pretty cold?

“A. You would put an overcoat on if you had one and if you hadn’t you went in without one and took a chance.”

He then identified Plaintiff’s Exhibit 1, which was the drawing showing the defrosting layout.

The Court: I have read it here down to where you started reading, possibly the previous question, but everything down to there is all preliminary, don’t you think, counsel?

Mr. Lewis Lyon: Yes, your Honor. [453]

The Court: Why take up half an hour’s time in reading it then?

Mr. Lewis Lyon: I see no reason in doing that, your Honor. My only objection was as to arguing the effect of it at the present time or making any interpretation of it.

The Court: I think that we can trust you to see that if counsel starts to argue in his statement of summary that you will object.

Mr. Lewis Lyon: All right, your Honor. That is what I did.

Mr. Neave: Now, your Honor, do I understand the procedure is that the direct examination of this witness is to be reported, and copied from this deposition?

The Court: Let me suggest this—I do not know whether this is good or bad—but if I were in your position and the judge had made the suggestion that I have made, I would say: “We next have the deposition of Edward George Kennedy, who lived at 13 Wible Street, Etna, Pennsylvania, who worked for the Carnegie Steel Company and who worked in and about the cooling room (or what-

ever you call it) and who in the first part of his deposition identifies the exhibit and makes practically the same explanation of this operation down to page 78, where I want to read the thing that is material," and then you read the things that you think are material.

Mr. Neave: All I am thinking about, your Honor—I [454] don't want to read the cumulative material, but I would like to have it copied into the record.

The Court: I see no reason why you can't in view of the summary statement which you can make in three lines which can consume seven or eight pages of reading.

Mr. Neave: I would like to have pages 74 through 83 copied into the record, and the summary that I have given your Honor is all the summary that is necessary of this deposition. You have heard the summary of it now so that I don't think we need to take any more of your Honor's time on that if those pages are copied into the record.

The Court: All right. Do you see any objection to that?

Mr. Lewis Lyon: No, your Honor.

The Court: In other words, if he makes a summary statement concerning the cumulative matters. He reads the questions and answers which he thinks this witness adds to additional proof on the material issues of the case. Then the whole deposition is copied into the record so that for the benefit of argument you may have it in the event that there is something that should be specifically called to the Court's attention which he has not read or which you wish to take advantage of on cross examination or otherwise. So he finished his direct examination.



Mr. Lewis Lyon: That, as I understand it, is the entire deposition, both direct and cross, that is to be copied in? [455]

The Court: You have got to make your determination about the cross examination. Now if you want to read all the cross—

Mr. Lewis Lyon: No, not all of it.

The Court: Then you make the same kind of a statement on your cross examination he has made, he and you and I together, on the direct.

Mr. Lewis Lyon: I will simply ask that the cross examination be copied into the record at this time. I believe that the witness corroborates the facts developed on the cross examination of the first witness, Mr. Brandt.

The Court: Now you are arguing,

Mr. Lewis Lyon: All right. I will ask that it be stricken.

The Court: All right.

What is there in here that you want to read in the cross in question and answer form which, so far as I can see, up to this time as revealed by the testimony turns on the question of the temperature of the cold room when they were defrosting it?

Mr. Neave: Our position is that the testimony—I don't want to argue it—our position is that the testimony says that it is below freezing. Now there are no records produced by these witnesses to support that because they had all been destroyed. [456]

Our further position is that the prior use is an effective prior use whether the temperature was above or below freezing.

The Court: I think I understand your whole position.

Mr. Neave: Very good, sir.



The Court: But right now the state of the record is that this situation existed there and they did defrost with water and the situation of the pipes and the drain.

Mr. Neave: Yes.

The Court: I doubt if the defendant would have any testimony to prove that that plant didn't exist.

Mr. Lewis Lyon: No, your Honor. The question is as to its condition and as to its operation in which we will put on further evidence, and also from the standpoint of the cross examination.

In the cross examination of Mr. Kennedy I would like to call the court's attention at this time to page 86, Question 22, having particularly to do with the so-called drain valve.

The Court: All right. Now will you read into the record the questions and answers?

Mr. Lewis Lyon: Yes, your Honor.

"CQ22. Similarly, above each one of these valves which led to the spray headers there was a drain valve to drain that portion of the line which was above that valve?

"A. This drain here? [457]

"CQ23. Yes.

"A. To my knowledge, it was below this valve.

"CQ24. And then this model is wrong in that it has a relief valve above the stand pipe—above rather than below it? "A. Yes.

"CQ25. Therefore, the operation would be to cut off this valve leading to the standpipe to stop the water from flowing through the spray header and then open the drain

valve which was located on the other side and below that control valve?

"A. To the best of my knowledge, yes.

"CQ26. That drain valve then operated to drain only that portion of the line which was below the control valve to the spray header? "A. Yes.

"CQ27. You operated that system yourself, did you?

"A. Yes, sir.

"CQ28. Many times.

"A. I operated that for quite a little while before I was sent over as chief engineer.

"CQ29. You believe you know, when you say that drain valve was located in that position, what you speak of?

"A. That has been so long ago that, you know, I could possibly be mistaken on that myself.

"CQ30. You actually operated the system?

"A. Yes. [458]

"CQ31. Is it an actual fact, Mr. Kennedy, that the reason this system was drained was because this whole pipe system outside of this plyboard structure and outside of this second plyboard structure was out in the open air and if you did not drain it because of freezing weather conditions you were liable to freeze up the whole system?

"A. There wasn't much chance so long as you kept that valve open.

"CQ32. You were supposed to keep that open to avoid freezing it up? "A. Yes."

Mr. Neave: Now I offer the redirect examination, all of it, and call your Honor's attention to page 88, to redirect Question 10:

"RDQ10. What about the water in the pipes that are above the valves that turn the water off and on? How do you drain the water out of those vertical pipes?

"A. That is what I say, it has been so long ago I may be mistaken on this drain being on the bottom. It may have been on the top.

"RDQ11. I show you Plaintiff's Exhibit No. 1, which you say is a drawing of a water system of the Isabella Plant, and again call your attention to the drawing which shows a 1 inch drain valve and see whether it refreshes your recollection as to where that drain valve was in the pipe with reference to [459] the water valve."

The Court: Mr. Lyon's objection is overruled.

"A. It appears to me that drain was up here.

"RDQ12. That is above the water valve?

"A. Yes."

That is all I wish to summarize from the redirect examination, your Honor.

The Court: Do you wish any more of his redirect to go in?

Mr. Neave: Yes, I want it all to go in.

The Court: I mean, does Mr. Lyon wish to read it at this time.

Mr. Lewis Lyon: No, I don't desire to read it at this time on the redirect.

On the recross examination I desire to have that all copied in the record. There are points in that which I believe should be called to the court's attention, but I believe that they can be summarized in argument as well as was the cross examination.

The material that I would like to point out at the present time is the testimony dealing with the temperature of the air in the chambers brought out on page 95, Question 35, or starting on page 94 with cross Question 33:

"RCQ33. Do you know the temperature of the pipes during defrosting? [460]            "A. No.

"RCQ34. Do you know the temperature of the pipes when the air was blowing over them under the influence of the fan which was circulating the air through the system?

"A. I could not tell you the temperature of the pipes.

"RCQ35. Do you know what the temperature of the air was or have you ever measured that?

"A. I do not know.

"RCQ36. Have you any figures of the temperature of the air which left this system through the header pipe which is the large silver pipe at the head of the structure?

"A. I don't know."

With the offering of the entire recross examination, that is what I desire to call the court's attention to at the present time.

The Court: Very well.

EDWARD G. KENNEDY,

called as a witness on behalf of the Plaintiff, having been first duly sworn by Gertrude E. Ryan, Notary Public, testified as follows:

Direct Examination

By Mr. Neave:

DQ1. What is your full name?

A. Edward George Kennedy. [461]

DQ2. What is your residence address?

A. 13 Wible Street, Etna, Pennsylvania.

DQ3. What is your present occupation?

A. Maintenance engineer at Westinghouse High School.

DQ4. And that is in Pittsburgh? A. Yes, sir.

DQ5. Did you ever work for Carnegie Steel Company? A. Yes, sir.

DQ6. Were you employed by them from 1893 to 1915, December, 1915? A. I was.

DQ7. Did you ever work in the Dry Blast Plant?

A. I ran that plant when it was first put up.

DQ8. When was that, when you say, it was first put up?

A. About 1904, when they put it in operation. They started to build it in 1903. It probably went into operation about April or May, 1904.

DQ9. Will you give us a general description of what is in a Dry Blast Plant, what it consists of?

A. The purpose was to take the moisture out of the air used in the blast furnace, and get a dry, crisp air.

(Deposition of Edward G. Kennedy)

DQ10. What did the equipment consist of to reach this end? What did you have to get a dry, crisp air?

A. We had our compressors. We had two 225 ton York Machines and then we had our brine tank. Then we had our [462] cooling room. That is where the air went through these coils, these defrosting coils. The air went through them on to the top of the building to the blow engines and from the blow engines into the stoves and from the stoves into the furnace.

DQ11. Mr. Kennedy, when the plant was first put up, what was it that caused the refrigeration, the cooling? What did you use as a refrigerant?

A. That was direct expansion. We used all ammonia.

DQ12. How long did that last?

A. It might have lasted a month. I would not be positive but about a month. It blew up on the 29th day of May, 1904, on a Sunday afternoon. I will always remember that.

DQ13. What did they do to the plant after it blew up?

A. They turned around and put in the brine system, the brine tanks and coils, and they used this same room, the refrigerator room for the same purpose as what it was before. We pumped that brine in through these coils.

DQ14. When ammonia was used as the cooling medium, did you defrost the cooling coils? A. Yes.

DQ15. How was that done?

A. At that time, all you had to do was shut your expansion valves off on whatever coil was working. We had about 60 expansion valves in that room.

(Deposition of Edward G. Kennedy)

DQ16. When you used brine as a cooling medium, how did [463] you defrost at that time?

A. Well, we used water then. On the brine system we used water.

DQ17. Will you describe how water was used?

A. Up under your ammonia condenser there was a pan up there, I judge probably, I would not say positively, probably 18 or 20 inches deep, had a 6 inch line and that pipe ran from that down and outside of the building.

DQ18. From the pan under the condenser?

A. Yes. It was piped from there. Then we have this partitioned off in four compartments and there was a valve for every compartment.

DQ19. These valves that you are talking about, for every compartment, were on the water pipes?

A. Yes. That was water pipes.

DQ20. Going into the four compartments?

A. Yes. There was a pipe for each compartment.

DQ21. There was a valve on each pipe?

A. Yes.

DQ22. Will you continue?

A. Yes. You had a door down in the bottom underneath the coils to cut that part of the coils off, as many sections as were on that. You had a double door upstairs. You closed them. That cut that compartment off.

DQ23. When did you cut this compartment off? [464]

A. Whatever time he started to do his defrosting.

DQ24. That is, before defrosting?

A. Yes. He cut that off.



(Deposition of Edward G. Kennedy)

DQ25. When you closed these doors, could any air come through that compartment?

A. There might be a little come through. They never sealed it up tight; that is, not to my knowledge.

DQ26. What was done after these compartments were closed up?

A. He would turn around and open the valve on these brine coils and drain the brine out of these coils. Then he would turn around and go out and he would open the valve, the water valve on this compartment he was defrosting and there was a spray on that and that took your ice off.

DQ27. Took the ice off the brine coils?

A. Yes.

DQ28. What happened to the water from the melted ice?

A. That went down into the bottom into the well.

DQ29. Bottom of the cooling room?

A. Yes, into a well and we had a pump and we pumped that right back up on that ammonia condenser again.

DQ30. Where did the water come from originally?

A. Out of the river, river water. Of course you may wonder why it came out of the river but with 3 blast furnaces running Pittsburgh water wouldn't be a drop in the bucket [465] with what we had to pump.

DQ31. You have gotten us now so that the water is coming down over the brine coils to defrost. How long did it take to defrost?

A. That is something you could not answer. Everything in a plant like that was temperature. The hotter

(Deposition of Edward G. Kennedy)

the days, naturally it thawed off quicker and on colder days a little longer. Sometimes maybe your coil would build up more than it would others. You could not tell exactly how long it would take.

DQ32. What was the temperature of the cooling room before you started defrosting?

A. I could not tell you. That was way under freezing, way under freezing, when you started to defrost.

DQ33. Did you ever go into the cooling room?

A. Yes.

DQ34. Was it pretty cold?

A. You would put an overcoat on if you had one and if you hadn't you went without one and took a chance.

DQ35. When the frost had been taken off of the brine coils, what was the next operation?

A. Then you started your brine back into your coils and put that section in operation.

DQ36. Did you do anything with the doors at the bottom and top? [466]

A. Yes.

DQ37. What did you do?

A. You opened them up again.

DQ38. Did you do anything with respect to the water? What did you do with respect to the water in the pipes?

A. We shut that water off and opened the drain and drained that water out of there.

DQ39. Where was the drain?

A. Outside of the building. There was a platform on the outside of the building, outside of these coils was this 6 inch valve run along there and we would let it run down until there wasn't much there.

(Deposition of Edward G. Kennedy)

DQ40. How many drains were there there?

A. There was a drain on each pipe going into these and one drain at the end of the line. It was a blank flange. We had a valve on the end of that so if we forgot to drain one of them and opened that bottom it would drain the whole thing.

DQ41. These valves and the drain valves that you have referred to and the catwalk, where were they situated with respect to the cooling building?

A. Right on the outside of it.

DQ42. Was this catwalk outdoors or inside another building? A. It was outside.

DQ43. Outdoors? [467] A. Outdoors.

DQ44. I show you Plaintiff's Exhibit No. 1 and ask you if you can recognize this figure on the left of the drawing. A. What do you want here?

DQ45. Can you recognize this whole figure as of anything that you ever had seen before? Does it represent any structure that you have ever seen before?

A. These coils run along here.

DQ46. Coils in what building?

A. Coils in the defrosting building at the Isabella Furnaces. Here is your water line coming down here.

DQ47. The line on the left hand side of the drawing, outside of the building? A. Yes.

DQ48. And that runs up into the building?

A. Into the building.

DQ49. Where does it end up?

A. It ends up in this pan I was telling you about under the ammonia condenser.

DQ50. Inside the cooling building? A. Yes.

(Deposition of Edward G. Kennedy)

DQ51. Is the end of the line in the cooling building?

A. The end of the line is in the cooling building. This line here runs into the compartments.

DQ52. And the purpose of that is in order to spray— [468] A. Spray these coils.

DQ53. The brine coils?

DQ54. You were stating where this water came from.

A. It comes from the pan. There was a pan under the ammonia condenser up at the top of the building.

DQ55. What building?

A. That was right above your compressors.

DQ56. In the engine building?

A. In the engine building.

DQ57. I call your attention to the drawing on the left-hand side of the blueprint. It reads, "1 inch drain valve." What was that?

A. That was the valve, after you shut your water off your coils, that 1 inch valve was to drain that line, drain the line.

DQ58. What did it drain?

A. It drained what water was laying in that pipe.

DQ59. And did it drain the water that was inside of the cooler building? A. Not that line, it did not.

DQ60. Did it drain the water that was in the header on top of the coils? A. Yes, drained that down.

DQ61. I see on the left-hand side of the drawing, "6 inch water main." Where was the fifth drain valve in rela- [469] tion to that 6 inch water main?

A. The fifth drain valve was on the end of this line and that had a blind flange and it was drilled and there was a 1 inch drain put in there. That drain would drain

(Deposition of Edward G. Kennedy)

the whole thing. If you never open the other drains that would drain the whole thing.

DQ62. The line from the ammonia condenser coils?

A. Yes.

DQ63. You were head engineer in the blower room while you were there?

A. I was chief engineer, yes.

DQ64. And did the refrigerator room come under your supervision?

A. Yes. All the machinery they had out there came under me, all the blowing, the power house, electric plant and that.

DQ65. Was Mr. Brandt there while you were there?

A. Yes.

DQ66. Was Mr. William Swope?

A. Swope and I changed each other when they first started that. He ran one turn and I ran the other.

DQ67. When did this defrosting take place, during the daytime or at night?

A. It depended on the weather. At times they had to come out at night to do it. [470]

DQ68. Did you know Robert Taylor?

A. Bob Taylor, yes.

DQ69. Did you ever have an opportunity to become familiar with his hand writing?

A. He used to come in there day in and day out. If I saw his writing, probably I could tell you about it. Don't show me anything with his name or anything on it.

DQ70. I show you Plaintiff's Exhibits Nos. 2-A, 2-B, 3, 4, 5, 6-A and 6-B and ask you if you can recognize whose hand writing is on those exhibits.

A. That is Bob Taylor's.